

# Public Utilities



Volume 67 No. 8

April 13, 1961

## THE RISING COST OF UTILITY DEBT— WHAT CAN UTILITIES DO ABOUT IT?

*By Eugene S. Merrill*

« »

## Impact of Federal Regulation on Natural Gas Company Management

*By Edward Fa'ck*

« »

## Let Townsfolk Look over the Forecaster's Shoulder

*By James H. Collins*

« »

## Congressional Studies on AEC Regulation

78

# NEWS FROM THE COLUMBIA GAS SYSTEM

Inter-Office Correspondence

HIGHLIGHTS OF THE 1960 OPERATIONS OF THE COLUMBIA GAS SYSTEM INCLUDE A DRAMATIC "FIRST" IN THE BUSINESS OF DELIVERING NATURAL GAS. IN 1960, THE 10,500-HORSE-POWER THRUST OF AN AIRCRAFT JET ENGINE WAS HARNESSSED TO HELP PUMP 666 MILLION CUBIC FEET OF NATURAL GAS A DAY. THIS IS THE FIRST TIME AN AIRCRAFT JET ENGINE HAS BEEN USED AS A SOURCE OF STATIONARY POWER.

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# Public Utilities

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### ARTICLES

#### The Rising Cost of Utility Debt—What Can Utilities Do about It? *Eugene S. Merrill* 505

The author outlines steps to be taken to convince responsible agencies that higher bond ratings are in order.

#### Impact of Federal Regulation on Natural Gas Company Management *Edward Falck* 516

A discussion of the impact of federal regulation on natural gas company management.

#### Let Townsfolk Look over the Forecaster's Shoulder *James H. Collins* 523

The author feels that public utilities might profitably let the public into some of their forecasting programs.

### FEATURE SECTIONS

#### Washington and the Utilities ..... 532

#### Telephone and Telegraph ..... 536

#### Financial News and Comment ..... *Owen Ely* 539

#### What Others Think ..... 548

Congressional Studies on AEC Regulation ..... 548

Interior Backs Burns Creek Project ..... 549

Utility Leadership Called to Political Action ..... 550

Electric Generation Superstitions ..... 551

Do Issues Affect Elections? ..... 553

INGAA Urges Consumer Interest in Energy Studies.. 554

#### The March of Events ..... 557

#### Progress of Regulation ..... 561

#### Industrial Progress ..... 15

#### • Pages with the Editors . 6 • Utilities Calendar ..... 13

#### • Coming in the Next Issue 10 • Frontispiece ..... 14

#### • Remarkable Remarks .. 12 • Index to Advertisers .. 26

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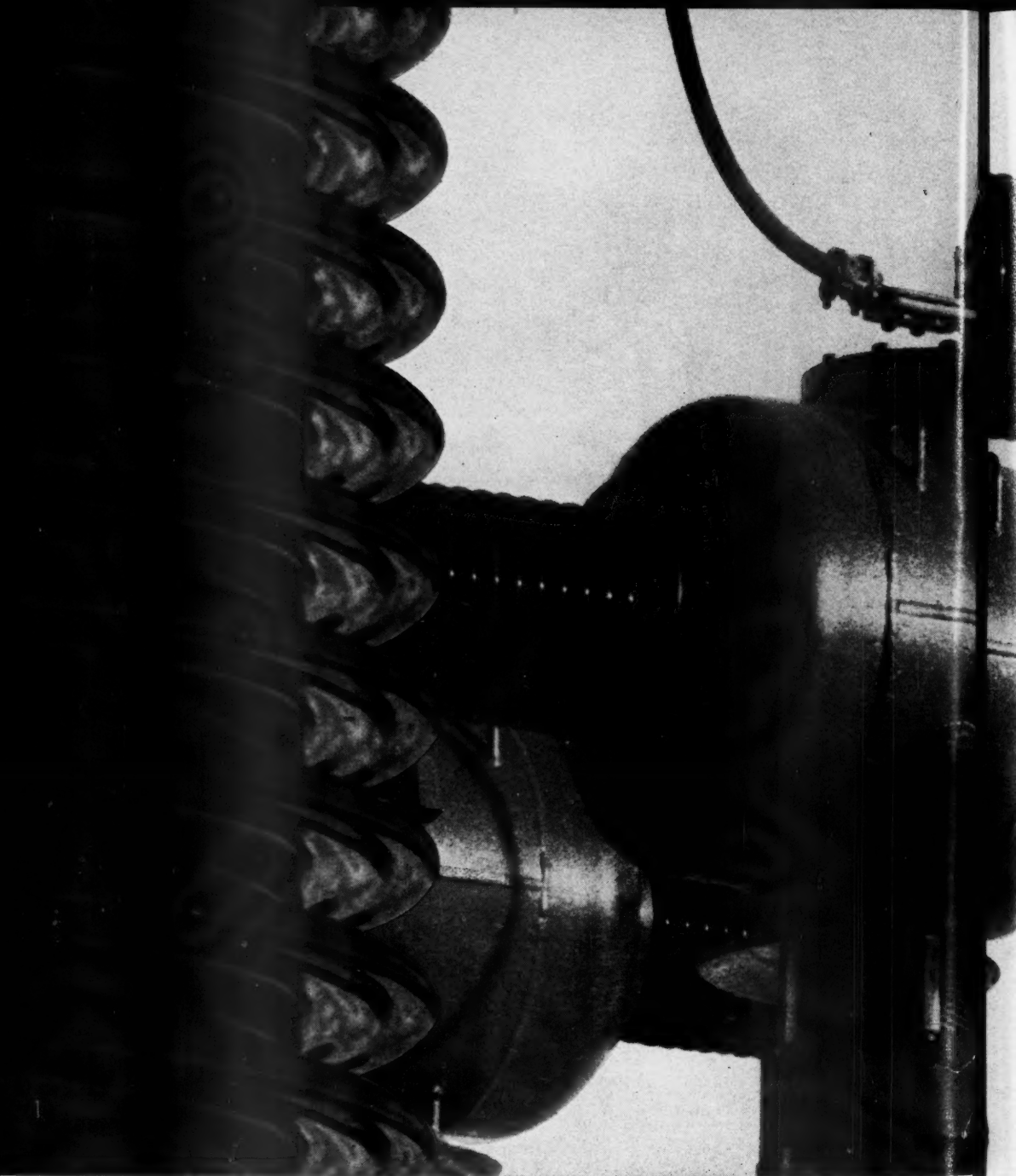
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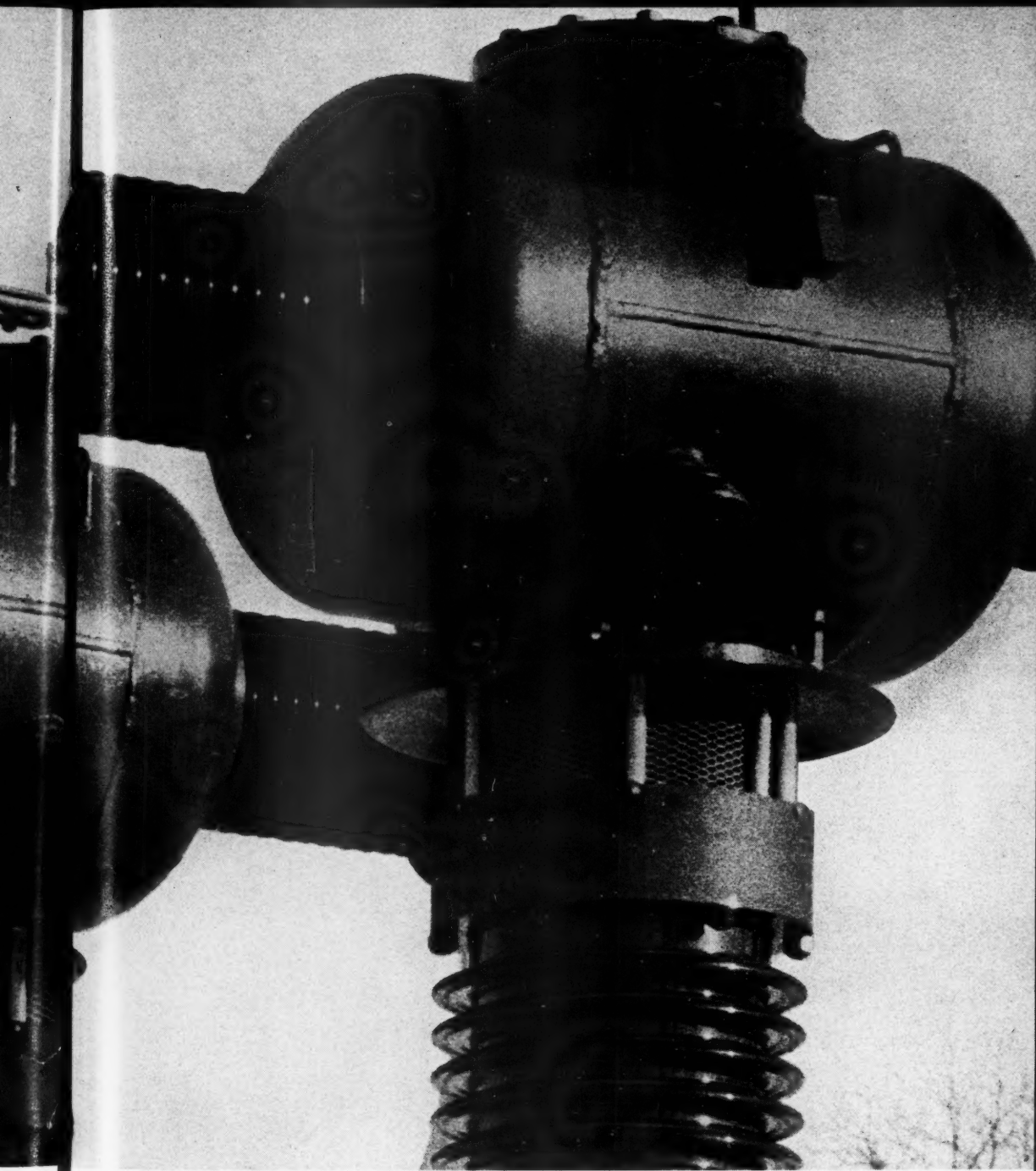
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# Pages with the Editors

**I**T now appears that once again the pulling and hauling which have been going on about the effectiveness of the regulatory commissions may result in a helpful compromise all around. This follows the earlier pattern of criticism of the regulatory commissions which has invariably resulted in making them stronger and more effective, so that it can be said that such discussions are beneficial on the whole.

EARLIER this year, when the so-called Landis report was filed, there was a fear that the creation of a new office of White House Overseer might compromise the independence of these regulatory tribunals. Since then both President Kennedy and Mr. Landis seem to have backed away from the idea that the independence of the commissions should be changed in any way.

ON the legislative front, the report of the House Subcommittee on Legislative Oversight suggested that it would require legislation to spell out the necessary reforms to make the federal commissions once more as effective as they ought to be. But since that time the regulatory commissions, notably the Interstate Commerce Commission, have shown that they could voluntarily take many steps to answer criticisms which have been made about their procedures and the ethics of their operations. It is now a fair question whether major legislation will be required. Representative Harris (Democrat, Arkansas) has introduced a bill to increase the membership of the FPC from five to seven, but passage this year is doubtful at best. Harris has also announced a permanent House Subcommittee on Regulatory Agencies.

**D**OES all this suggest differences or rivalries between the executive and the congressional branches? Differences—yes; but rivalries—no. Perhaps it can



EUGENE S. MERRILL

now be said that Congress has emerged in the top position from a back-of-scenes discussion about who should "oversee" the regulatory commissions. But this probably reflects a composition of views in which the aims, purposes, and functions of both the White House and Congress will be appropriately represented.

THIS subject was discussed in the House of Representatives by Representative Harris when he made it clear that Congress, on one hand, will insist on its traditional authority over the commissions, but that the White House, on the other hand, has every right to prompt and complete information about what these commissions are doing and how well they are doing it. Mr. Harris said at that time: "I have no intention of abandoning or neglecting the responsibility of the Committee on Interstate and Foreign Commerce in this important field."

**A**ND, so we have, here, two complementary views—one stressing the legislative approach and one emphasizing the administrative approach. There is, in addition, a third approach—not at all inconsistent with the first two, but which may prove most fruitful of all. That is

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STORIES AT

## PAGES WITH THE EDITORS (Continued)

the Conference on Administrative Procedures established by Chief Judge E. Barrett Prettyman of the U. S. court of appeals for the District of Columbia circuit.

THIS conference, established by order of President Eisenhower and supported by President Kennedy, will soon make known its method of operation for continuously improving the procedures of the regulatory commissions and other administrative agencies. By relying on the regulators themselves, as well as on practicing attorneys, administrative officials, and others, this conference, long planned by Judge Prettyman, promises to yield some very worth-while fruit in this troubled area.

THE opening article in this issue deals with the rising cost of utility debt and what utilities can do about it. It comes to us from EUGENE S. MERRILL, vice president and financial consultant of the Stone & Webster Service Corporation. MR. MERRILL graduated from Stanford University in 1928 with a BA degree in economics. In 1930 he received an MBA degree in corporation finance and accounting from Harvard University, Graduate School of Business Administration. Following his graduation he served as an instructor in accounting at Harvard Graduate School and later as research analyst and writer in business subjects for teaching purposes. From 1932 to 1934 he

lectured at Northeastern University on business policy.

IN 1934 MR. MERRILL joined Standard & Poor's Corporation as editor of its bond advisory service. During the next ten years he served as an investment expert in public utility securities, as a member of the bond rating committee, and as assistant to the executive vice president. In 1944 he became executive vice president of Standard Research Consultants, the position he held when joining Stone & Webster.

\* \* \* \*

THE article on the "Impact of Federal Regulation on Natural Gas Company Management," beginning on page 516, is written by EDWARD FALCK, consulting engineer of Washington, D. C. MR. FALCK is an engineering graduate (AB, '30; BS, '31; MS, '32) and a University Fellow of Columbia University. He will be recalled by many readers as the director of the Office of War Utilities (1944) of the old War Production Board. He also served as director of rates and research of the Tennessee Valley Authority and as a special assistant to the vice president of Consolidated Edison Company of New York.

MR. FALCK's contribution is a restatement, in article form, of a very interesting address he made to the Business History Conference held at Purdue University last February. This conference, held under the auspices of the American Historical Association's Committee on Documentary Reproduction, was headed by Professor Robert B. Eckles.

PARTICIPANTS in this conference covered a wide range of topics in the field of business regulation, including railroads, oil and gas pipelines, conservation, management, and federal regulation generally.

THE next number of this magazine will be out April 27th.



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EDWARD FALCK

*The Editors*





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# Coming in the Next Issue..

(APRIL 27, 1961, ISSUE)

## FROM RUINS TO A CATHEDRAL OF SERVICE

With the recent turnover of political controls in the federal government, there has been some apprehension among utilities, especially electric utilities, that certain trends toward socialization and other antiutility policies may be fostered by the new administration. So, it is most timely that we have in this article a case study by an author who for nearly three decades was the chief executive officer of an electric utility company which spent years under the shadow of public ownership since the very first New Deal—only to emerge triumphant and more secure than ever. Frank McLaughlin, recently retired board chairman and former president of the Puget Sound Power & Light Company, has written the story of this “rags to riches” ordeal of that organization, and it contains some guiding principles that are most applicable to the circumstances in which some other utility organizations may find themselves.

## LET'S ALL TALK THE SAME LANGUAGE

In the modern battle of semantics, the efforts of different professions and specialists to find a common denominator for terms relating to the same thing are becoming increasingly difficult because of the rapid growth of special usage of fairly common words. Even such an everyday word as “communications” means one thing to a telephone man, another thing to a public relations man, and still another thing to a letter carrier. This tendency toward language proliferation is nowhere so maddening as among professional specialists, such as engineers, accountants, lawyers, financial men, etc., engaged in the same overall business and often talking about the same plant property or system, as in the case of a public utility. George S. McDermitt, engineer of the Arizona Public Service Company, has put a good deal of time on finding a precise method of setting up common denominators for words which might otherwise have different meaning to different people.

## SOME ANSWERS TO THE QUESTION OF STOCK DIVIDENDS

It is a well-known fact that there are two basic classes of investors in public utility common stocks. One group, mainly small investors, are interested in high dividends, another group of larger and more affluent investors are interested in equity growth and not so interested in an extra large dividend pay-out policy increasing taxable income. Willard F. Stanley, utility financial specialist and writer, has suggested in this article a plan which would, in effect, give stockholders an option while at the same time complying with Internal Revenue Service regulations. The author believes that utilities using such an approach would enjoy very high price-earnings ratios for their common stocks.

**AND IN ADDITION . . .** Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.

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# Remarkable Remarks

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PAUL G. ROGERS  
*U. S. Representative from  
Florida.*

"The telephone has become a virtual necessity in the modern-day world and should no longer be taxed as a luxury."

FRANK LAURENCE LUCAS  
*Fellow of King's College,  
Cambridge University Reader  
in English.*

"Democracy is not, I think, a good form of government. There are no good forms of government. Democracy merely seems the least evil form, by far, for nations with enough good sense and good humor to play its complicated game."

GEORGE E. SOKOLSKY  
*Columnist.*

"The descriptions, conservative and liberal, mean so little in American political affairs, that it is impossible to draw a fixed conclusion from them. Only acts will show what is the complexion of this administration. At present, the most that can be said is that it is ideologically mixed."

MAURICE NELLES  
*Vice president of engineering,  
American Electronics, Inc.*

"The really successful executive of the future will, above all, be a businessman and will be qualified in all phases of business. He will have at hand new technological tools for sampling, measuring, and indicating his operations. He can then be the master of the situation and not just part of the system."

EDITORIAL STATEMENT  
*The Wall Street Journal.*

"... if education were controlled by Congress, that control would be used to guide education inescapably toward support of whatever economic, foreign, and defense policies the Congress has adopted. It would not be at all necessary to burn books, or even to rewrite them. It would be only necessary to choose for education in all the public schools the books that supported the policies of the government. It has happened before, as all history teachers know."

WILLIAM HENRY CHAMBERLIN  
*Columnist.*

"It would be an interesting and valuable project if some of the wealthy foundations, in which this country abounds, would set up a study of how many cases of proved violation of individual liberty can be traced to the bureaucratization of agriculture and the ever-increasing power of big trade unions. Stanley Yankus is not the first American who has sought the extreme remedy of emigration to get away from harassing interference with his right to farm his own land in his own way. A number of Mennonites have taken off for South America for the same reason. . . . And the fact that an exemplary citizen and a good farmer can be harried into flight by the persecution of an agency that operates outside the normal rules of law in its judgments and penalties is a sign that we have gone much farther on the road to collectivism than most Americans would like to think."

# Utilities Events Calendar

## CHECK THESE DATES:

- Apr. 13-15—Gas Appliance Manufacturers Association will hold annual meeting, Boca Raton, Fla.
- Apr. 16-18—Rocky Mountain Electrical League will hold spring conference, Boulder, Colo.
- Apr. 16-19—Association of National Advertisers will hold spring meeting, Washington, D. C.
- Apr. 17-18—Illuminating Engineering Society, Southwestern Region, will hold conference, Oklahoma City, Okla.
- Apr. 17-18—Pacific Coast Electrical Association, Business Development Section, will hold meeting, San Francisco, Cal.
- Apr. 17-19—Pacific Coast Gas Association will hold commercial-industrial sales conference, Los Angeles, Cal.
- Apr. 17-19—A & M College of Texas will hold annual conference for protective relay engineers, College Station, Tex.
- Apr. 17-19—American Gas Association-Edison Electric Institute will hold national conference of electric and gas utility accountants, St. Louis, Mo.
- Apr. 17-19—National Watershed Congress will be held, Tucson, Ariz.
- Apr. 17-20—International Advertising Association will hold meeting, New York, N. Y.
- Apr. 18-19—Ohio Telephone Association will hold annual convention, Columbus, Ohio.
- Apr. 18-20—Southwestern Gas Measurement Short Course will be held, University of Oklahoma, Norman, Okla.
- Apr. 19-21—American Institute of Electrical Engineers, Great Lakes District, will hold meeting, Minneapolis, Minn.
- Apr. 19-21—American Water Works Association, Nebraska Section, will hold meeting, Lincoln, Neb.
- Apr. 20—Federal Power Bar Association will hold annual meeting, Washington, D. C.
- Apr. 20-21—Edison Electric Institute, Industrial Relations Committee, will hold meeting, New Orleans, La.
- Apr. 20-21—Indiana Gas Association will hold annual convention, French Lick, Ind.
- Apr. 20-22—American Association of Advertising Agencies will hold annual meeting, White Sulphur Springs, W. Va.
- Apr. 20-22—American Water Works Association, Arizona Section, will hold annual meeting, Chandler, Ariz.
- Apr. 23-26—American Water Works Association, Southeastern Section, will hold annual meeting, Greenville, S. C.
- Apr. 24-26—Edison Electric Institute, Accident Prevention Committee, will hold meeting, Chicago, Ill.
- Apr. 24-26—Southern Gas Association will hold annual convention, New Orleans, La.
- Apr. 25-27—American Public Power Association will hold annual convention, San Antonio, Tex.
- Apr. 26—Pacific Coast Gas Association will hold electronic data processing round table, San Mateo, Cal.
- Apr. 26-27—Indiana Electric Association will hold annual young men's utility conference, Indianapolis, Ind.
- Apr. 26-28—Institute of Radio Engineers, Region Seven, will hold technical conference, Phoenix, Ariz.
- Apr. 26-28—Northwest Electric Light and Power Association will hold joint Engineering and Operation Section and Personnel and Safety Section and Purchasing Committee meeting, Portland, Ore.
- Apr. 26-29—American Water Works Association, Pacific Northwest Section, will hold annual meeting, Victoria, British Columbia, Canada.
- Apr. 27-28—Pacific Coast Electrical Association-Pacific Coast Gas Association will hold joint administrative services conference, San Mateo, Cal.
- Apr. 29-May 3—National Association of Electrical Distributors will hold annual convention, Detroit, Mich.



*Courtesy, Long Island Lighting Company and Newsday*

### **The Eskimo Way**

*These two men were flown to the Fire Island community off the south shore of Long Island by helicopter, following one of the season's heavy snowstorms last winter.*



# Public Utilities

## FORTNIGHTLY

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NUMBER 8



## The Rising Cost of Utility Debt— *What Can Utilities Do about It?*

Because the yield on utility bonds is influenced by ratings, and because items other than earnings coverage and capitalization ratio do enter into the ratings of bonds, it is most important that utilities with a fixed charge coverage higher than their rating group find out the factors which contribute to the assignment of a lower rating. The steps outlined in this article suggest what such a company might do to remedy this situation.

By EUGENE S. MERRILL\*

A NUMBER of important forces which materially benefited the public utility industry and helped it to cope with strict rate regulation in many areas and with the inflationary rise in construction costs were at work during most of the postwar period—the fifteen years since 1945. The favorable operating forces included the continuing increase in

demand by all types of utility customers, development of air-conditioning and house-heating loads, and improvement in the load factor.

Earlier, from the mid-1930's until the mid-1950's, the electric and gas industries had been able to borrow long-term debt at low interest rates and to obtain preferred stock capital at low dividend rates. This low-cost money has been a favorable financial force during the postwar period.

\*Vice president, Stone & Webster Service Corporation, New York, New York. For additional personal note, see "Pages with the Editors."

## PUBLIC UTILITIES FORTNIGHTLY

The utility industry took full advantage of this low cost of debt and preferred stock capital in the postwar period, with many companies increasing the ratio of debt and preferred stock to total capital.

As a result, even though most utility companies were limited to a rate of return on total capital no higher and in some instances lower than prewar levels, the industry was able to increase the return on its common stock capital to well over 10 per cent and to maintain it at that level and thereby to remain competitive with nonregulated industry in the capital markets.

It is generally agreed that the favorable demand factors will continue in the 1960's, necessitating further tremendous outlays for construction. This means that both the electric light and power and the natural gas industries will have to raise even more capital in the next ten years than they did in the past ten years; however, the influence of cheap money which so materially benefited the public utility industry in the postwar period will have a waning influence in the 1960's.

### Money Rates

CHART 1, page 507, which graphically portrays the yields on outstanding Aa utility bonds annually from 1935 through 1960 and monthly in 1960 and January, 1961, shows that the era of low money costs ended about 1955. Yields of 3 per cent at the start of 1955 increased to almost 5 per cent in 1959. Public utility companies borrowing during 1958 and 1959 paid well over 5 per cent on average for their capital.

Since the peak in money rates in Sep-

tember, 1959, bond yields have declined somewhat. Yields on seasoned Aa utility bonds as of early February, 1961, were moderately below their 1960 average of 4.53 per cent but far above the average of 2.91 per cent for the ten-year period from 1946 through 1955. Offering yields on new issues of Aa utility bonds in 1960 and January, 1961, are shown in the upper right-hand corner of Chart 1. Offering yields averaged 4.78 per cent in 1960 and 4.53 per cent in January, 1961, with the cost to the company being about four to five basis points higher. (A basis point is the equivalent of 1 1/100 of 1 per cent.) The spread in this 13-month period between offering yield and yield on seasoned issues was 24 basis points.

WHILE economists differ as to what lies ahead for business generally, there seems to be more agreement than usual as to the prospect for interest rates. It is anticipated that during the next few years interest rates will not move upward sharply, nor will the extremely tight money conditions of 1959 be repeated, since the new administration can be counted upon to take definite steps to halt such a movement. On the other hand, despite the allegiance of the new administration to easy money, it is not anticipated that interest rates will again decline to the low levels prevailing in the period before 1955. Rather, the consensus seems to be that interest rates will hold pretty close to the levels prevailing in late 1960 and early 1961. This would mean yields moderately above the 4 per cent level for seasoned investment grade bonds and borrowing costs on new long-term debt of from 4½ per cent to a little over 5 per cent, depending upon the qual-

## THE RISING COST OF UTILITY DEBT

ity of the bonds issued. If this proves to be the case, it would mean that the public utility industry in the 1960's will pay a higher rate for each new dollar borrowed than the average cost of its present debt.

### The Increasing Cost of Utility Debt

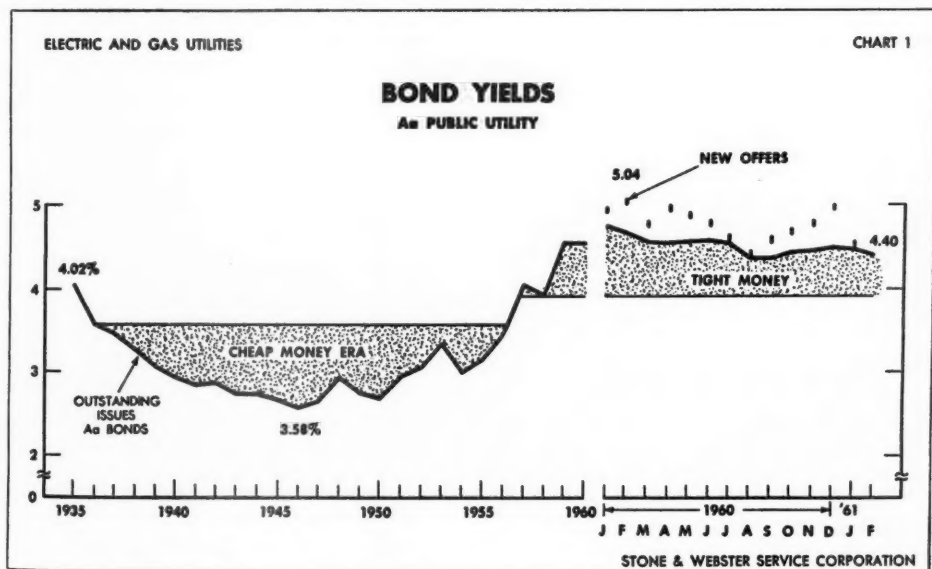
**B**ECAUSE utility companies typically sell bonds with distant maturities—usually thirty years in the case of electric utilities and twenty-five years in the case of gas utilities—the benefits of the cheap money available prior to 1955 carried over into the tight money era. This is manifest in the fact that a large part of utilities' long-term debt outstanding today carries coupon rates of  $3\frac{1}{2}$  per cent or less.

The cost of debt outstanding of the electric utility industry as shown in Chart 2, page 509, declined from 4.60 per cent in 1940 to 3.20 per cent in 1951.

Since then the cost of debt increased to 3.70 per cent in 1960, reflecting the higher coupon rates of more recent offerings.

**T**HE cost of long-term debt outstanding of the gas utility and pipeline industries, as shown in Chart 2, declined from 4.15 per cent in 1942 to 2.81 per cent in 1948.

It therefore appears that, for a period of some years, the indicated cost of long-term debt outstanding of the gas industry was lower than that of the electric utility industry. This reflects the fact that a large part of the growth of long-distance pipelines took place in the postwar period, enabling these companies to take full and immediate advantage of low interest costs existing at that time. The electric utilities were still in the process of refunding in the early postwar period so that higher coupon rates for the past continued their



## PUBLIC UTILITIES FORTNIGHTLY

effect which, together with duplicate interest during refundings, raised debt cost as compared with the pipelines. Since the postwar low, the cost on outstanding debt of the gas utility and pipeline industries has increased more sharply than the cost for the electric utility industry and was 4.20 per cent in 1960. This reflects the greater impact of sinking funds and serial maturities on the gas utility and pipeline industries.

### Reduced Return on Common Equity

WITH the debt of the electric utility industry outstanding in 1960 costing 3.70 per cent and that of the natural gas industry 4.20 per cent, and with borrowing costs likely to be in the range of from  $4\frac{1}{2}$  per cent to over 5 per cent in the years ahead, it is inevitable that the cost of debt capital of the public utility industry will increase in the 1960's as required construction is financed.

Concomitant with the rise in debt cost, there will necessarily be an increase in the cost of preferred stock capital. This combined increase in costs will squeeze the return on the common stock equity. To maintain the return on common stock at the levels realized in the 1950's, utility companies will have to seek and obtain higher returns from the regulatory commissions.

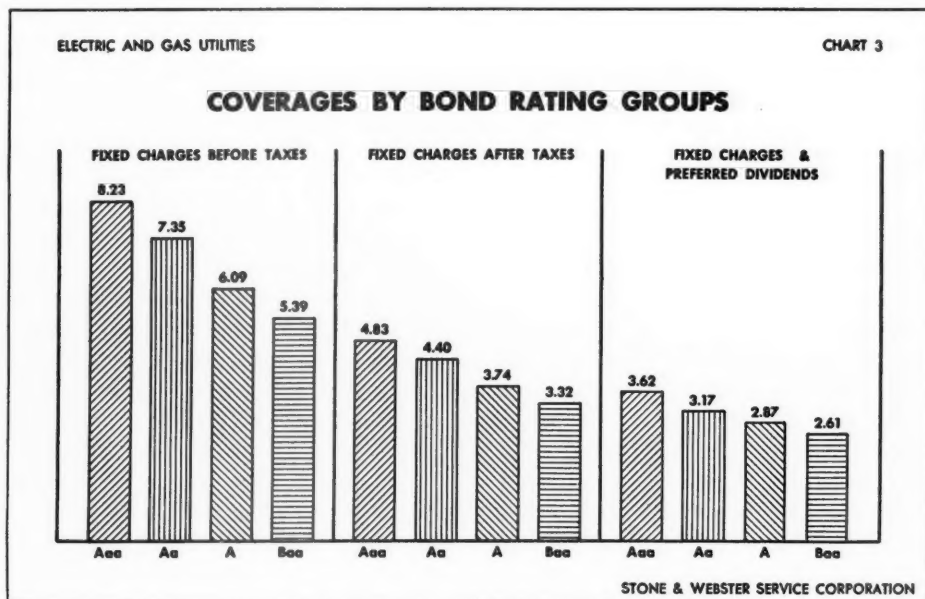
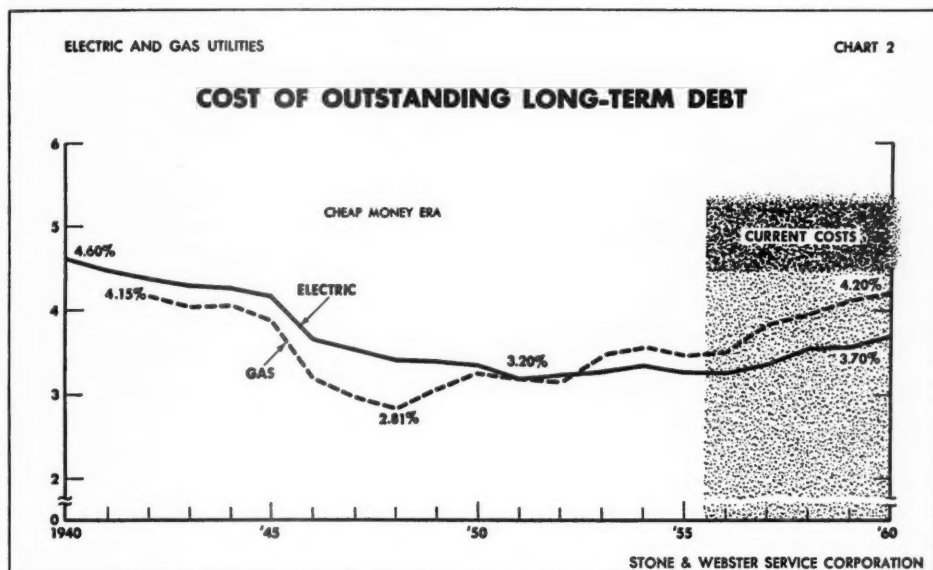
### A Program for Utilities

Now, what does all this mean for the individual utility company? Faced with the prospect of having to obtain long-term debt and preferred capital at a cost higher than it is paying for its outstanding capital, the individual utility

company should take definite steps to, among other things, maintain the return on its common stock, as follows:

1. Complement a careful forecast of revenues and construction and other expenses with the necessary year-by-year or month-by-month financing. (Project beyond the customary five-year period for sales, construction, and financing. By this it is not meant that year-by-year estimates of sales and construction should be made beyond the five years. Consider, however, the probable magnitude of construction and financing requirements beyond 1965 and the impact of bond maturities as they begin in the late 1960's and beyond.)
2. Test the key balance sheet and income statement items thus obtained and the ratios derived from them against the standards generally acceptable.
3. Change any of the controllable items entering into the projections so long as judgment indicates more reasonable results are obtainable which are compatible with policies of management and the divergent views of consumers, investors, and the regulatory commissions.
4. Consider seeking a higher rate of return if the prospective increase in long-term debt and preferred stock costs, together with other items, appear likely to reduce the return on common equity below the average return earned in the postwar period.
5. Compare with other companies as to factors entering into the rating of bonds so as to assure maintaining or improving investment position.

## THE RISING COST OF UTILITY DEBT





## PUBLIC UTILITIES FORTNIGHTLY

### Importance of the Bond Rating

**T**HE quality of a bond, in the last analysis, is determined not by the rating accorded it by a rating agency, but by the many factors determinative of its intrinsic worth.

However, since underwriters and investors have faith in the bond rating agencies and their ability to determine this intrinsic worth or quality, which is summed in the rating assigned to the bond, the rating of a new offering largely influences the price the underwriter initially and the investor later is willing to pay.

Since the cost of borrowing increases as the quality of a bond—and its investment rating—declines, as evidenced by the spread in yields, it is important for a utility company to maintain high quality—and a high investment rating. The spread in yields between A and Aa electric and gas bonds averaged only 14 basis points in the period of easy money from 1946 to 1955. The spread increased after 1955, averaging about 25 basis points from 1957 to 1960.

**T**HE spread between triple A and double A bonds has always been narrow and has not widened much in the recent years of tight money, averaging only 6 basis points in 1959 and 1960. But the spread between A bonds and the highest quality B-rated bonds (Baa) has averaged around one-fourth of 1 per cent in recent years, and has tended to widen during periods of poor business. It is then evident that utilities should seek to meet the investment standard needed to merit at least an A rating and, if possi-

ble, a double A rating. The triple A rating, however, is considered by many to be incommensurate: The differential in cost is not sufficient to warrant meeting the higher standards required for the rating.

Because the spread in yields between top-rated bonds and low-rated bonds tends to widen during periods of market uncertainty and higher interest rates, the maintenance of high investment ratings on bonds will be even more important for utility companies in the period ahead—a period in which the industry will have to borrow heavily at interest rates expected to be above the average cost of presently outstanding debt.

**A**LSO, the spread between the offering yields on new bonds and the yields on outstanding seasoned bonds tends to widen in a period of rising interest costs and of general money market uncertainty. A study of gas utility financing has been made by the writer which measures the spread under varying market conditions.

In the period of easy money and stability from 1947 to 1952, the spread between offering yields on new A-rated gas issues and yields on outstanding bonds of the same rating was narrow—averaging only 13 basis points. In the period since 1955, when the country moved from an era of cheap money to an era of tight money and when there was considerable uncertainty in the money markets, the spread in yields between new issues and the seasoned issues widened. The spread was around 60 basis points for both gas and electric companies in 1957 and has averaged around 30 basis points in the period 1958-60.

## THE RISING COST OF UTILITY DEBT

It is evident that yield data on outstanding seasoned bonds do not tell the whole story. It is the yield demanded at the time of the flotation of a new bond issue that determines the cost of debt money to the utility, not for one year, but for the term of the issue—unless the issue can be called before maturity. In a period of high-cost money or money market uncertainty, the investment banker at the time of the underwriting demands, as these statistics show, a higher yield in relation to yields on outstanding bonds than he does in a period of low-cost money and money market tranquility.

It therefore behooves every company to obtain the best possible rating.

### Factors in Rating Bonds

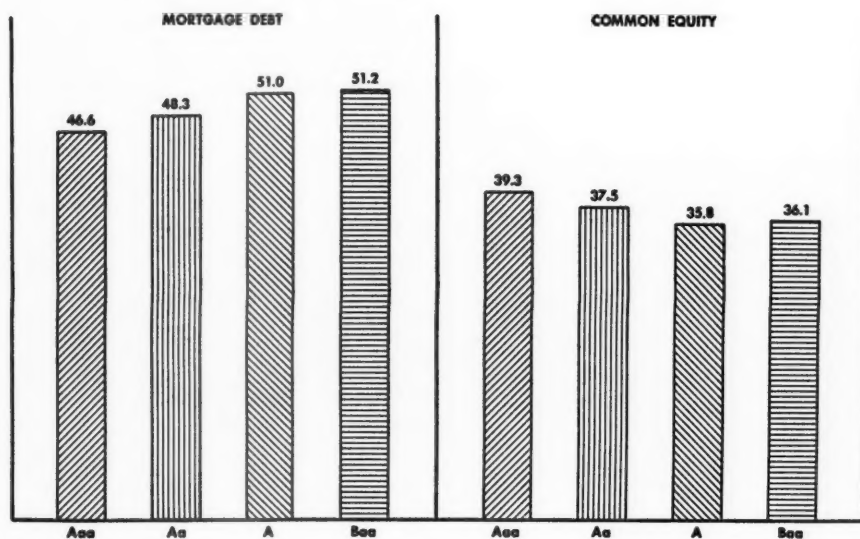
**E**ARNINGS protection for fixed charges as well as asset protection for long-term debt are always computed and studied by the rating agencies before assigning a bond quality rating, with earnings protection being given preponderant weight in determining investment value, since in the final analysis assets are worth only what they can earn.

Other factors, measurable and non-measurable, tangible and intangible, are considered. These include capitalization ratios, growth trend, load characteristics, operating stability, nature of territory, management, public ownership sentiment in the area served, and attitude of regu-

ELECTRIC AND GAS UTILITIES

CHART 4

### CAPITALIZATION RATIOS BY BOND RATING GROUPS



STONE & WEBSTER SERVICE CORPORATION

## PUBLIC UTILITIES FORTNIGHTLY

latory bodies. The size of the company also affects the rating, with bonds of smaller companies tending to be rated lower than bonds of larger companies even though otherwise on a par statistically. This is based on the generality that the small utility company probably has less economic diversification as to customers and revenue and is therefore more subject to cyclical change and, also, because of its size, is more likely to be handicapped by lack of strong banking connections or technical knowledge or other resources.

### Bond Rating *versus* Earnings Coverage

A STUDY<sup>1</sup> of 116 companies made by the writer as to both straight electric and combination electric and gas companies, discloses that their bonds were rated as follows:

No. of Companies	Bond Rating
10	Aaa
52	Aa
45	A
9	Baa
116	

This comprehensive study showed, in general, as would be expected, a direct relationship between earnings coverages and bond quality ratings. For example, as shown on Chart 3, page 509, "times charges earned after taxes" which was 4.83 for Aaa bonds was 3.32 for Baa bonds.

Likewise, "times fixed charges and preferred dividends earned" was 3.62 for Aaa bonds compared with 2.61 for Baa bonds.

<sup>1</sup>A copy of this study may be obtained by writing to the author, Eugene S. Merrill, vice president, Stone & Webster Service Corporation, New York 4, New York.

### Bond Ratings *versus* Capitalization Ratios

THE study of 116 companies confirmed the logical relationship that, in general, as debt as a percentage of total capital increases, bond quality ratings decrease and as common equity as a percentage of total capital decreases, bond quality ratings decrease (Chart 4, page 511).

### Bond Ratings *versus* Yields

THE yields on bonds, as would be expected, increase as quality ratings decline as shown in Chart 5, page 513. That is, the yield on the Aaa bonds was 4.46 per cent compared with 4.93 per cent for Baa bonds. Significantly, the quality of the bonds is carried over to the preferred stocks, with the preferreds of companies with lower-rated bonds being considered inferior to preferred stocks of companies with higher-rated bonds: The average yield of preferreds of companies with Aaa bonds was 4.83 per cent, increasing (with the decline of quality groups) to 5.35 per cent for preferreds of companies with Baa bonds.

### Variations in Yield within Bond Quality Groups and between the Groups

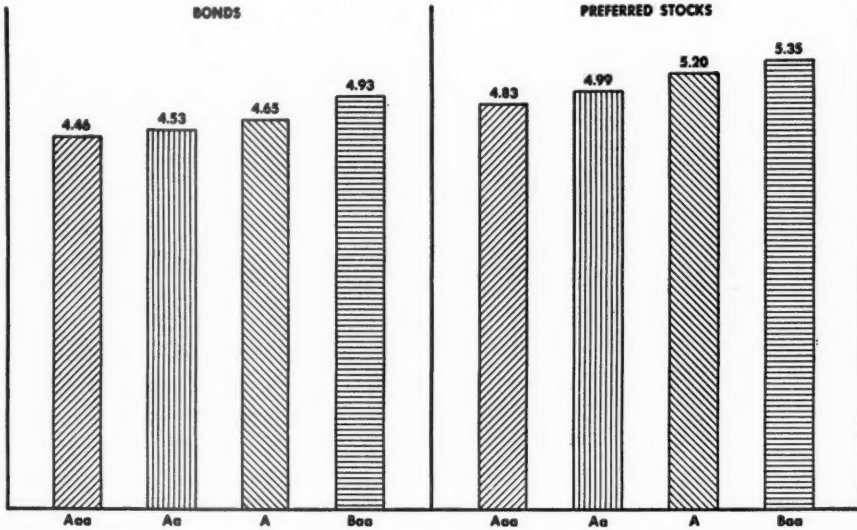
WHILE there is this definite linking of bond quality group with the earnings coverage, with capitalization ratios and with yields, as shown, there is considerable variation within each group. Chart 6, page 513, was prepared in order to bring out the variation within and between the rating groups. To prepare it the 52 Aa companies were arranged by order of the magnitude of their "fixed charge coverage after taxes" with the Aa company having the highest coverage in the

## THE RISING COST OF UTILITY DEBT

ELECTRIC AND GAS UTILITIES

CHART 5

### YIELDS BY BOND RATING GROUPS

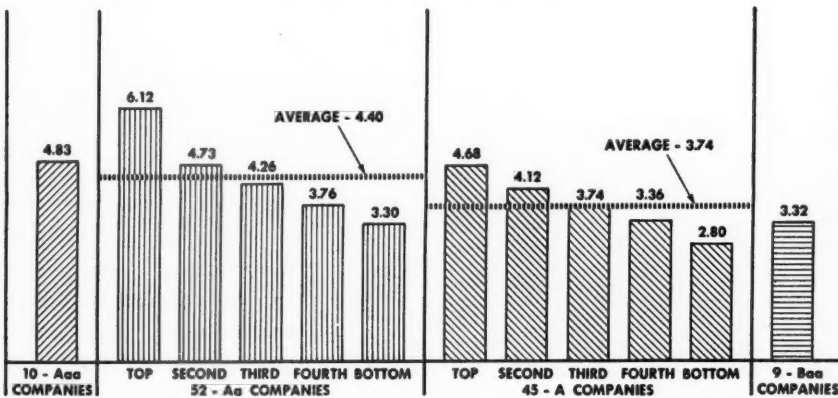


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ELECTRIC AND GAS UTILITIES

CHART 6

### ANALYSIS OF COVERAGES WITHIN BOND RATING GROUPS (FIXED CHARGES EARNED AFTER TAXES)



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## PUBLIC UTILITIES FORTNIGHTLY

first position and the Aa company with the lowest coverage in the last position. These were then divided into five groups or quintiles with an average "fixed charge coverage after taxes" computed for each quintile.

The 45 A companies were similarly divided into five groups or quintiles.

Variation within and between the ratings groups is illustrated by the following example: The top fifth of the utilities as measured by fixed charge coverage in the A group has a higher fixed charge coverage than the bottom fifth of the Aa group.

**S**IMILARLY, all the other ratios—fixed charge coverage before income taxes, overall coverage, mortgage debt to total capital, and common equity to total capital—are better for the top quintile of the A group than for the bottom quintile of the Aa group. A chart for each of the other ratios would show the same picture shown in Chart 6 for "times fixed charges earned" as indicated by data in the supporting study.

However, investors, in appraising these utility bonds, apparently do not consider the bonds in the top fifth of the A group as of high quality as the bonds in the bottom fifth of the Aa group. Investors demand a higher return on these A bonds as is evidenced by the fact that the average yield of 4.62 per cent for the top group of A bonds is 15 basis points higher than the average yield of 4.47 per cent for the bottom group of the Aa bonds. The average yield of 4.62 per cent for the top group of A bonds is, in fact, in line with the yields of the other A bonds—the average yield for all the A bonds being 4.65 per cent.

### How Does Your Company Compare?

**W**HILE there is no fixed formula used by a rating agency in determining bond quality ratings, if a utility company knows how its bonds compare with those of another utility, as indicated by the standard ratio of fixed charge coverage and of debt to total capital and the like—knows whether its bonds statistically are near the top or the bottom of the quality group the rating agency has assigned—it can then be more purposefully guided.

If its ratios are below the group average it may want to consider taking steps to assure continuation of its rating. If its ratios are above the average of its group it may want to consider trying for a higher rating by the time of the next financing. Or, it may want to meet with the rating agencies, directly or indirectly, to learn just what it is, internally or externally, that keeps its bonds from enjoying the rating its earnings protection seems to merit.

### Conclusions

**I**T then becomes apparent that yield is influenced by rating and that items other than earnings coverage and capitalization ratios have entered into the ratings of bonds. Our exploration illustrates the importance of companies with a fixed charge coverage higher than their rating group—and in keeping with the coverage of bonds with a higher rating—ascertaining, if possible, the factors other than earnings protection that contribute to the assignment of the lower rating. With this knowledge, it may then be possible for the company either to remedy the situation



## THE RISING COST OF UTILITY DEBT

or to present a story that will convince the agencies that a higher rating is in order.

**W**HILE it is important to obtain debt capital and preferred capital as cheaply as possible in the period ahead, this will not be enough. Even more important is the maintenance of the return on the common stock equity. It was the ability of the industry to maintain the return on the common stock equity at well over 10 per cent during a period of growth that lifted the market price of utility common stocks well over book value. This permitted the industry to sell large amounts of common stock at levels consistently above book value, thereby continuing to enhance the position of the stockholder.

**I**F the industry is to be in a position to raise the capital required in the 1960's, it is imperative that the return on the common stock be maintained. If after obtaining the long-term debt and preferred stock capital at the lowest possible cost it becomes evident that the return on the common stock for a utility company will be reduced below the levels that prevailed in the 1950's, which permitted the company to finance expansion in that decade, it will be necessary for the company to seek a higher rate of return.

Certainly, if a rate of return of from 6 to 6½ per cent was fair when long-term debt capital could be obtained at 3 per cent or less, a considerably higher rate of return is in order as overall debt cost trends upward from 4 per cent.

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**"W**E in General Electric believe in and benefit from vigorous competition. The success of the economy of the United States—a success unmatched anywhere, any time—is based solidly on the concept of a free and competitive market, with the government helping to see that the economy does remain truly competitive. Operating such a competitive economy places great responsibilities on those engaged in business. We must of course observe both the letter and the spirit of the laws that affect business activity. But of equal importance, we must work in an ethical framework that is appropriate to a free, competitive system.

"This system will remain free and competitive only so long as the citizens, and particularly those of us with responsibilities in business life, are capable of the self-discipline required. If we are not capable of self-discipline, the power of government will be increasingly invoked as a substitute, until the system is no longer free or competitive. When we speak of business ethics in a free and competitive system, therefore, we are talking primarily about self-discipline."

—RALPH J. CORDINER,  
Chairman of the board, General Electric Company.

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# Impact of Federal Regulation on Natural Gas Company Management



By EDWARD FALCK\*

This article is specifically addressed to the problem of the impact of federal regulation on natural gas company management. Regulation is more than lawyer business. It is a matter which can have a most decisive effect on decisions of management, even in the area of day-to-day operations. A true understanding of what regulation means will tend to minimize wasteful if not painful dislocations which management might experience if it were to pursue its course, heedless of such considerations.

**I**t is a truism that all businesses that are affected by public interest are subjected to government controls of varying intensity. As compared with the more traditional forms of public utilities—railroads and water, electric, telephone, and urban transit companies—that have been subjected to regulation for upwards of fifty years, interstate natural gas pipelines have been under federal regulation for the relatively short period of time since 1938, when the Natural Gas Act was passed, and independent producers

\*Consulting engineer, Washington, D. C. For additional personal note, see "Pages with the Editors."

of natural gas have been regulated only since 1954, when the Supreme Court of the United States decided the celebrated Phillips Petroleum Company case.

**B**USINESS spokesmen frequently inveigh against regulation because it is expensive, time consuming, and often aimed at reducing business profits. However, it should be obvious to all serious students of economics that regulation of public utility type industries is necessary, that it has been made workable, and that the industries themselves have continued to grow and prosper in spite of regulation.

## IMPACT OF FEDERAL REGULATION ON COMPANY MANAGEMENT

**I**N fact, some observers may point with pride to many of the beneficial effects of regulation itself. Certainly in the field of securities underwriting, the Securities and Exchange Act and the SEC have been helpful in achieving a stable and orderly means of marketing securities, with correlative benefits to corporations seeking additional capital, underwriters, investors, etc.

Another example I might cite where regulation has actually been constructive is in the improvement of accounting methods. The uniform systems of accounts promulgated by the Federal Power Commission and various state regulatory commissions have undoubtedly been helpful to management in analyzing its own operations and to stockholders, bondholders, investment analysts, and the financial world in general.

At the risk of seeming trite, I might say that regulation cannot be characterized as wholly good or wholly bad in terms of the ultimate objectives of business.

**T**URNING first to the producers, let us consider some of the specific areas in which the process of managerial decision making has been complicated by federal regulation under the Natural Gas Act.

Shortly following the passage of the Natural Gas Act in 1938, questions were posed as to the precise limits of the jurisdiction of the Federal Power Commission. The commission decided that it had no jurisdiction over intrastate distributing companies or independent producers. However, the commission's view on this matter was subsequently challenged by the Wisconsin Public Service

Commission in a jurisdictional case involving the question whether or not Phillips Petroleum Company was a natural gas company subject to FPC jurisdiction. The commission had decided that it was not; however, upon appeal the case finally went to the Supreme Court, which decided in 1954 that Phillips Petroleum Company and other independent producers making sales to interstate pipelines were in fact subject to FPC jurisdiction.

### Producer Management Problems

**F**OR several years following the 1954 court decision, producers were hopeful that remedial legislation would be passed by Congress restoring their previous position of complete exemption from FPC control. However, efforts to secure the passage of such legislation met with failure, one bill being vetoed by President Truman in April, 1950, and another by President Eisenhower in February, 1956. Gradually, both the FPC and the producers themselves reached, albeit reluctantly, the conclusion that producer regulation was here to stay.

Among the management questions that now confront an independent producer are these: (1) Should he sell gas from a newly discovered field to an interstate pipeline, thus subjecting himself to FPC controls, or should he make a sale at a lower price to an intrastate buyer or, if none is available presently, should he hold the gas for possible future sale to an intrastate buyer? (2) If the decision is made to make an immediate sale in interstate commerce, what price should the producer seek in his negotiations with the pipeline buyer, bearing in mind the precedents that have been established by the

## PUBLIC UTILITIES FORTNIGHTLY

commission in the last several years in establishing price conditions on producer sales in different areas?

In arriving at a management decision between making a sale now or holding the gas reserve for some future sale under better circumstances, the producer must weigh the conflicting factors of the interests of royalty owners, possible losses due to drainage of his gas reserves by neighboring producers, and the expectation of either (1) higher prices following the historical upward trend, or (2) lower prices that may be imposed by the commission, depending on what theory and method of price regulation it finally evolves.

With respect to this last point, it may be observed that the commission, after more than six years of responsibility to regulate producer prices, has not yet established any final criteria for producer rate making. Thus an independent producer today who is about to risk venture capital either for wildcat exploration or development wells on proved acreage must face not only the ordinary risks inherent in exploration and development activities but also the additional risk of government price regulation of a fluid and unpredictable character.

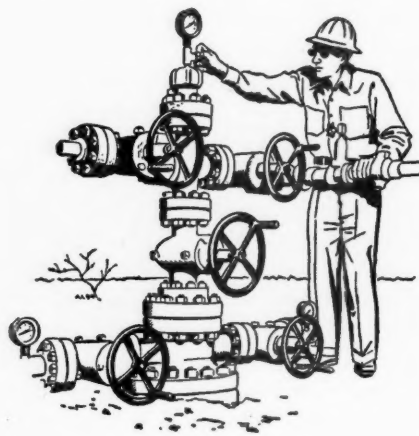
### Responsibility for Regulatory Confusion

THIS is not to suggest that the author is joining the distinguished adviser to President Kennedy, Dean James M. Landis, in his wholesale condemnation of the Federal Power Commission for its failure to clarify producer regulation up to this time. Certainly the Federal Power Commission must share some of the blame for the many years of chaos and

confusion in producer regulation. However, the producers themselves have not been outstanding in coming forward with constructive proposals, and the courts have issued opinions that have been and now are creating tremendous administrative difficulties.

FOR example, in the City of Detroit case<sup>1</sup> the U. S. court of appeals for the District of Columbia circuit reversed the Federal Power Commission, which had earlier determined that the gas produced from its own reserves by Panhandle Eastern Pipe Line Company should be priced by reference to prevailing field prices rather than to cost of production. Instead, the court said that cost of production must be considered an "anchor" from which departures could be permitted only when the commission made a finding based upon evidence in the case that such departure was required and was no more than what was required by the public interest.

<sup>1</sup> City of Detroit v. Federal Power Commission (CA DC 1955) 97 US App DC 260, 11 PUR3d 113, 230 F2d 810.



## IMPACT OF FEDERAL REGULATION ON COMPANY MANAGEMENT

**M**ANY public utility experts who have studied this matter in great detail have come to the conclusion that the courts have erred in their thinking, because they conceived cost in the case of producers' cost as a quantum that could be specifically ascertained. There are large and obvious areas of cost that cannot be directly or causally related to production of gas.

As an example, the total overall cost of exploration and development is incurred by a producer in the search for both oil and gaseous hydrocarbons. In order to ascertain the cost of the gas, an equitable portion of this exploration and development expense must be allocated between the two joint products.

Results of cost allocation are necessarily factitious, as every tyro in the field of economics knows. Furthermore, even if cost ascertainment were possible under uniform accounting standards and allocation formulae upon which industry and government were substantially agreed, the determination of producer prices on a company-by-company cost basis would lead to ridiculous results. Individual company prices in a given field, depending upon the widely fluctuating cost experiences of different producers, would create a crazy-quilt pattern of prices.

**I**N order to eliminate the necessity for having thousands of rate cases, involving massive quantities of evidence on the costs of individual producers, the commission in September, 1960, announced an area price policy under which it hoped to establish area price ceilings to set limits both for initial prices of new gas being committed to interstate com-

merce and for escalated prices of gas being sold under old contracts containing escalation provisions.

The legality of this approach already has been challenged, and, unless there is specific legislation on the subject, it will probably be years before producers can know whether the area price approach will in fact supersede the earlier company-by-company approach.

### Pipeline Management Problems

**T**HE interstate pipelines, as indicated earlier, have been operating under federal regulation for more than two decades. Their managements are therefore more accustomed to regulatory controls and are better equipped to cope with the management problems created by regulation. We need consider here only two broad areas of gas pipeline management concern that are directly affected by regulation: (1) expansion, and (2) rates.

Pipelines are not permitted to expand their facilities without first having obtained from the FPC a certificate of public convenience and necessity. In making application for such a certificate the pipeline must disclose full particulars concerning (1) its source of supply, including its own production and gas purchase contracts with other producers; (2) the engineering design and route of the proposed pipeline, together with an estimate of the cost of construction; (3) the new or expanded markets to be supplied; (4) the economic feasibility of the project; and (5) the proposed method of financing.

**F**OR a major new pipeline project or a major expansion of existing pipelines the application itself together with nec-



## PUBLIC UTILITIES FORTNIGHTLY



essary exhibits is voluminous, to say the least. After the Federal Power Commission has accepted the application, notice is published in the *Federal Register* and every party having a legitimate interest is permitted to intervene. Interventions are frequently made by wholesale customers of the pipeline, state commissions, and competing fuel interests, such as coal, oil, and railroad associations.

OUT of an excess of caution, and in order to preserve the niceties of "due process," the commission has been very liberal in permitting interventions. Furthermore, when the hearing has been commenced, interveners are given very liberal opportunity for asking clarifying questions, cross-examining the witnesses of the applicant pipeline, and submitting rebuttal evidence. Hearings, particularly in cases involving competition of two or more pipelines seeking to serve the same market, have been protracted and costly. For example, the hearings on proposed introduction of natural gas into the Pacific Northwest took several years. The same is true concerning the original hearings on proposed pipelines to the New England market.

APRIL 13, 1961

DURING the many months of hearings on a certificate case, the pipeline management is faced with the responsibility of holding together a newly acquired package of gas through contracts with gas producers. These contracts normally have a termination clause permitting the producer to withdraw his supply and sell his gas elsewhere if the pipeline has not obtained a satisfactory certificate by or before a specified date.

Pipeline managements must also maintain a call on money for interim financing of construction and underwriting arrangements for selling mortgage bonds and common stock during the long period when the date of final approval of the project is necessarily indefinite. A further problem inherent in long-drawn-out certificate cases is the increase in costs which frequently occurs because of increases in the price of steel pipe, compressors, and other equipment, and rising labor costs.

THIS writer would again emphasize that he is not implying that the blame for delay should be put squarely on the shoulders of the commission. Coal interests and other adversary interveners

## IMPACT OF FEDERAL REGULATION ON COMPANY MANAGEMENT

have made a notable contribution to delay.

Even after the commission has acted favorably on a certificate application, interveners have often sought appellate review. When a pipeline proceeds with construction under a certificate that has been granted but is subject to litigation, it does so at its peril. Here there is a grave management problem involved in weighing the legal risks on the one hand against the probable increased costs if construction is further postponed.

Temporary certificates have sometimes been issued by the commission where emergency conditions require immediate construction. However, such temporary certificates do not afford any real solution to the basic difficulties engendered by delay in the granting of permanent certificates. Just as in the case of litigation, a pipeline proceeding with construction on the basis of a temporary certificate takes a very serious gamble.

### Rate Change Difficulties

It might be mentioned in passing that gas distribution company managements also are confronted with problems arising out of uncertainty as to the date when a proposed pipeline expansion will be approved. The gas distribution companies have difficulty in planning their own expansion to new market areas and increases in sales to existing customers until such approval is definite.

The earnings of pipeline companies are a direct function of the rates that they are permitted to charge. While the rate-making principles and procedures for pipeline companies have been well clarified over the last two decades of FPC regulation, frequently judicial decisions

and proposed legislative amendments have been a cause of great concern. Several years ago, a famous circuit court decision,<sup>2</sup> would have prevented pipelines filing for increased rates unless their contracts with their wholesale customers specifically provided for such filings. For several months after the Memphis decision, pipeline expansion plans were frustrated, because many managements felt that they would not be able successfully to finance these projects in the light of this decision. On December 8, 1958, the Supreme Court of the United States reversed the U. S. court of appeals for the District of Columbia circuit,<sup>3</sup> and the pipeline industry resumed its normal growth.

PRESENTLY, legislation has been suggested which, among other things, would prohibit a pipeline from filing for increased rates if there is already in effect an increased rate, the reasonableness of which the commission has not determined.

These proposals received the endorsement of the National Association of Railroad and Utilities Commissioners at its annual meeting in Las Vegas, November 28, 1960. Undoubtedly the pipelines will vigorously oppose enactment of any such amendment to the Natural Gas Act. However, its adverse impact on pipeline rates and earnings is easy to discern.

There are many other areas in which Federal Power Commission regulation has an impact on pipeline management

<sup>2</sup> *Memphis Light, Gas & Water Div. v. Federal Power Commission* (CA DC 1957) 102 US App DC 77, 21 PUR3d 209, 250 F2d 402.

<sup>3</sup> 26 PUR3d 314.

## PUBLIC UTILITIES FORTNIGHTLY

decision making. Space does not permit touching upon all of them. An important one, however, is the commission supervision of prudent expenditures by regulated companies. In a recent case, Texas Eastern Transmission Corporation acquired gas reserves from several producers in the Rayne field. The commission granted a certificate for the necessary construction without passing directly upon the question of the reasonableness of the price paid for these reserves by the pipeline. Later the commission's action was reversed by the U. S. court of appeals for the District of Columbia circuit, the court saying that it was the duty of the commission to pass on the

reasonableness of the price paid for these reserves.<sup>4</sup>

OTHER expenditures made by natural gas companies either for construction or for ordinary operations can be disallowed in rate cases if the commission finds that they were unnecessary or extravagant. Accordingly, strict controls are indicated in utility management, not only because of ordinary business considerations but also because of possible later review by the commission.

<sup>4</sup>Public Service Commission of the State of New York, *Petitioner, v. Federal Power Commission, Respondent, Texas Eastern Transmission Corp. Intervener*; No. 15,412, December 8, 1960.

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### How to Get Economical Government

"THERE is no question that the American people can have economy in government operation—if they really want it. In the typical national budget there are many examples of conspicuous waste and unnecessary spending. This is because while most people recognize that economy, as an abstract proposition, is desirable, all too many people belong to pressure groups which regard government funds as a bountiful grab bag. . . .

"If there is to be a real campaign for economy, a fallacy which has gained ground through repetition should be exposed and scotched. This is that reckless government spending is necessary for an 'expanding' economy. The refutation is not far to seek. How was America able to expand its output, as it certainly did on a tremendous scale, in the time when there was no personal income tax and Grover Cleveland could declare that, while the people should support the government, the government should not support the people? The answer is obvious: Private capital and enterprise furnished the means of expansion.

"It is up to the American people to decide how highly they rate the tremendous asset of a sound and stable dollar. Scores of economies, big and little, will prove possible as soon as we put aside two ideas: That it is up to the government to compensate every group or individual suffering from miscalculation of economic trends; and that America owes a living to the rest of the world."

—WILLIAM HENRY CHAMBERLIN,  
Columnist.

# Let Townsfolk Look over the Forecaster's Shoulder

He is trying to figure how his company is going to live there in five, ten, fifteen years. That is their concern, too. They have only one yardstick for utility services—rates. He has others, used in community building, including some new ones, that they ought to understand.

By JAMES H. COLLINS\*

Now, after many years, it appears that the North-South war between San Francisco and Los Angeles is coming to an end. Without summit meetings or appeasement. There is peace. Neither side lost anything. Both have won.

This happy outcome has implications for those utility people who have in charge the forecasting of growth in the communities where their companies do business, and need understanding. For these cities have some new yardsticks for measuring community well-being, yard-

sticks that, if better understood by citizenry, might promote better relations for utility companies, and be better for their towns.

What set "Frisco" and "LA" by the ears, back in the 1880's, was a rivalry for population.

It has been said that men will fight for territory, gold, and women. Add ideologies and theologies. There was a period in our national history when they fought for population. To have more people than some rival town was counted fine and dandy. That was the age of the frog emulating the ox.

\*Free-lance writer, resident in Washington, D. C.



## PUBLIC UTILITIES FORTNIGHTLY

**P**OPULATION was a good enough yardstick for measuring community well-being until California experienced its first explosion of Dust Bowl refugees. The "Grapes of Wrath" horde poured in in jalopies and on freight trains, hungry, homeless, needing work and medical care. The state's resources were swamped. There was talk of turning them back at the border, but that would have taken too many cops.

Even so, this was population at the grass roots, people who would be good citizens when they got settled. Before the greater explosion of war workers, the Dust Bowl refugees had got work, and started enterprises that employed others—including born Californians.

### Army Engineers Project Curves

**P**OPULATION was a reliable yardstick for utility management until war began moving people about. Vital statistics in a utility town ran along on a fairly even level. Forecasters plotted curves of births, marriages, real estate transfers, put pins in maps where, five years hence, new exchanges and substations could be built now, and be certain that the new customers would be there.

Utility forecasting was not particularly interesting to townspeople, and the details were not published.

Today, utility forecasters, with community builders everywhere, have a new set of yardsticks, of real popular interest, even dramatic, and of definite value in public relations. If townspeople understood what makes a town grow, nowadays, some of the friction incident to growth might be eased. Without forward plans based on these new yardsticks, a

utility company would soon be lost in the wild blue yonder of change.

One of these yardsticks is abbreviated by economists as "R&D." It stands for research and development, and has been a factor in America's growth since colonial times. Ben Franklin was an outstanding "R&D" man.

In classic economics, progress is based on land, labor, and capital. Taking research and development as a new factor, economists are asking, "What price the American way of life if, with all the land, labor, and capital thought to be necessary, had there been no Edisons, Bells, Whitneys, McCormicks, Singers, Fords?"

**A**LITTLE while ago, Army Engineers began projecting curves around the San Francisco Bay region, and found R&D working there like yeast.

Army Engineers make no comparisons between towns. Their concern is with harbors. The Bay region is one of the world's greatest harbors. Around its shores there is a vigorous industrial growth that is partly sparked by harbor facilities. What the harbor will have to be tomorrow is the responsibility of Army Engineers. They took a long look. They took a 50-year look.

One of the basic industries of this region is oil—refining and petrochemicals. Lately, with overproduction and competition, the oil business has had a 75 per cent lag.

But other industries are taking up slack. Chemical manufacturing, electronics, business machines, food products, packaging, metal working. The Bay has been selling 50 per cent to 100 per cent more toiletries, soaps, cosmetics, house-



## LET TOWNSFOLK LOOK OVER THE FORECASTER'S SHOULDER

hold detergents, and like consumer specialties, and fertilizers, insecticides, and industrial raw materials.

This chemical manufacturing is rated No. 1 for the Bay's future. If a student in high school today found that he had a bent toward chemistry, and in college got a chemical engineering degree, in five years he would be fairly certain to find a job, and perhaps get into business for himself. For he would be working with R&D, and that town-building factor can be found in most towns, and is important to utility forecasters, and something to be pointed out to townspeople.

### When Chemists Fried Potatoes

IN handing out the West's natural resources, nature bestowed upon an Idaho valley a peculiar volcanic ash soil, that was found to be super for growing big baking potatoes.

On its size, shape, and mealiness the Big Baked Potato came to stand for Idaho, its russet skin trade-marked, the fact that potatoes grown elsewhere could be baked almost erased from the consumer mind.

But from a community standpoint the Idaho article lacked this and that. It was seasonal, with jobs in the planting and harvesting weeks, and unemployment after it had been shipped away raw. It had crop fluctuations. Potatoes have long been a speculative crop, the farmer planting liberally when prices were up, and reducing his plantings when they were low, to come into a glutted market next fall. With the best-laid plans there were always weather, general business conditions, and so on.

During the war Idaho dehydrated some

of its potatoes for the Armed Forces, an idea that had been kicking around since the Kaiser war. The service boys were not enthusiastic about the product, and anyway that would have been only an emergency market.

However, research was continued after the war. Chemists learned more about the chemistry of the potato. Frozen foods came in. Chemists evolved the frozen fry. That did the trick.

### One Little Word Sells Women

HOTEL and restaurant chefs took to the frozen fry immediately. There was no argument as to who could fry potatoes better. The article did away with peeling and cooking in high rent space, and eliminated an expensive kitchen peak while other items on the menu were cooking.

The housewife was a different proposition. The notion that research is a matter of microscopes, and pilot plants, and white coats in "labs," is erroneous. Some of its tricks are psychological, and this was the strong lever with the Idaho



## PUBLIC UTILITIES FORTNIGHTLY

frozen fry, for the housewife, in the supermarket. Women have fought for property rights, for the franchise and all. Not a single woman ever chained herself to a lamp post to win instant foods. She was handed them in the refrigerated cabinet, and took to them with a bang. Conditioned to quickies by national advertising, with her outside job, the housewife sees a new freedom in that word "instant."

Today, Idaho has a dozen or more factories, cooking French fries, hashed brown, creamy mashed potatoes. People have steady jobs through the year. And there is the utility dividend—more gas and electricity consumed.

### When Los Angeles Was Invisible

**W**HEN Army Engineers took a 50-year look at the San Francisco Bay region, as a port, projecting curves, they projected the present population curve, 4.5 million people in 13 counties, and found that it would double in about twenty-five years, and be approaching 15 million in fifty years. They made no comparisons, but there was a basis for feeling that "Frisco" was outpacing "LA," not in population, but in these research and development businesses.

Around the Bay today, there is high regard for branch factories of big companies making nationally promoted products, because they bring in hundreds of ready jobs. But dozens of towns also understand and solicit the R&D enterprise.

This is a new element in community building. It is almost an underground thing. The typical research and development concern may crop up in rented

quarters, desk space, with a handful of technicians, and scientists, and an idea. An idea that was not appreciated by the company they worked for, so they quit, to develop it for themselves. It could have been that their company considered the idea crackbrained, and they were fired. It may be that their idea is not easily explained, because they are exploring to find out themselves what it is.

This is a cut-and-try fringe of industry, with many failures, as well as spectacular successes, and likely to be discovered in any community.

For example, it turned out to be a big, basic factor in New York city, in the recent 25-year survey of its future. It has always been a factor there, and utility people who see relations values in disclosing it to the citizenry, might well look into the history of their community.

**I**N the 1880 census, San Francisco had a quarter-million people, the second largest city west of the Mississippi. The gold rush was only thirty years away, but the town had a sense of history fit for London or Rome. It has a cosmopolitan bounce expressed by the native son who said he had visited 18 cities on his eastern trip, and two country towns.

"What were the country towns?"

"New York and Chicago."

At that time, Los Angeles with its less than 15,000 people was a pueblo around a *zanja*, a ditch that brought its water supply, and from the Golden Gate was invisible. Its sunshine and sand had some inexplicable allure for Easterners, but to live there! Perish the thought. The day would come when San Franciscans would be sentenced to life terms in the south-

## LET TOWNSFOLK LOOK OVER THE FORECASTER'S SHOULDER



ern town as its climate attracted researchers and developers. Happily, that would be in a future generation.

### Picking Oranges with Gloves

UTILITY forecasters investigating R&D as an element of growth in their companies' communities, to understand and go along with it, and encourage the popular understanding of it, and teamwork with it, will find it at work even in villages.

To grow oranges in a winterless land had a magic appeal for eastern business and professional men in the 1880's, and Los Angeles sent orange trees, bearing fruit, to eastern winter shows. For the less well-heeled migrants, the railroads in a rate war ran dollar excursions from Chicago. The dollar excursionists, with no return tickets, had to go out immediately and look for jobs, in a town that baked its own bread, and washed its own shirt, but had no factories.

The orange-growing types were accustomed to attacking difficulties with science. There were plenty of difficulties in oranges, horticultural, financial, mar-

ketwise. A mysterious decay in transit blocked off the populous eastern cities. An association was formed by the growers, and an expert hired to study decay, for which many theories had been advanced. His report was too simple to be credited.

"Let your pickers wear gloves," he advised. "Give them blunt clippers, get some smooth field boxes. Decay is blue mold. It gets in through tiny fingernail and splinter cuts."

Picking oranges with gloves? Pretty la-de-da!

"All right, you pick a car of oranges your way, and I'll pick one my way, and we'll check up in Chicago."

Oranges have been picked with gloves ever since.

AUTOMOBILES were still in the cross-country endurance stage. The Los Angeles region was ideal for that. Aviation before the Wrights was dabbled in in primitive dirigibles—who remembers Roy Knabenshue, Santos-Dumont? Their funny ships with one-lung engines eventually grew into the great plane plants.

## PUBLIC UTILITIES FORTNIGHTLY

Oil was found in gusher volume by deepening the seepages where the Mexicans had dug tar, the first wells sunk with spades, but that led to an oil tool industry, in which machine shops set up to repair farm equipment grew into precision tooling.

R&D the Mother of Invention! Electrical appliances were mostly limited to electric irons, made in the East. But electric irons had a weakness—their points were always cold. Los Angeles made a hit with one that had a hot point, and sold in competition so well that an eastern appliance company bought out and moved the business.

The population race is told in census figures:

	<i>San Francisco</i>	<i>Los Angeles</i>
1890 .....	298,997	50,395
1900 .....	342,782	102,479
1910 .....	416,912	319,198
1920 .....	506,676	576,673

### When the Citizenry Sees Eye to Eye

**W**HAT about pocketbook interest in R&D and the newly discovered town yardsticks, for citizenry and the utility company?

Utility service is nothing to worry about in a household budget. With \$100-a-week income. Telephone, electricity, gas, and water will range around \$3 to \$4 monthly per member, not counting long toll calls, space heating, or air conditioning. It is an item lost sight of in major expenses, offering little margin for economies.

The public really has only the rate yardstick for utility service rates. It is headlined in rate cases. The quality of service has not been sold, though real rates, even today, are being reduced, as

with the wider range of local calls in telephone service.

Another undeveloped yardstick is availability of utility services. War shortages and postwar backlogs are still remembered, but the possibility that they might occur again is a factor for the utility forecaster.

He sticks a pin in the town map today, and advises the building of a new exchange or substation out in the fields, to take care of demands five years hence. Townspeople know very little about the technique upon which his recommendation is based. He follows vital statistics, birth rates, marriage licenses, real estate transfers, the bewildering day-to-day zig-zags in the town's growth.

**T**HERE should be some popular interest in what happens afterward. If the pin is put where there are not enough customers five years hence, the company loses money. And loses money if the demand for service exceeds the facilities provided, and customers cannot be served. Such shortages affect the community's industries and homes.

More than one utility forecaster has trembled for his job when management was skeptical, and hesitated about building the new exchange out in the sticks. There was one instance in a telephone company when a new exchange was built but scaled down a couple of stories. In five years it was three or four stories too small. In ten years it could have been built at half the recommended capacity, because in the meanwhile the miniaturizing transistor had been invented.

A simple reason for showing yardsticks to townspeople would be, regardless of

## LET TOWNSFOLK LOOK OVER THE FORECASTER'S SHOULDER

propaganda for utilities, to let them see that their community is a growing thing, maybe comparable to a youngster, lately out of the "bang-bang!" age, and getting into the teens, with more complicated requirements.

Popular intelligence is likely to be underrated. Intelligent townspeople, allowed to look over forecasters' shoulders, could be interested in the new yardsticks, and see eye to eye with utility management.

### Yardsticks from the Big Town

NEW YORK is just winding up a 25-year look into its future, meaning the region of Manhattan and boroughs and New Jersey industrial towns, with an inner ring of suburbs, and an outer ring reaching into New York state, New Jersey, and Connecticut counties. It cost \$600,000, paid for by the Ford Foundation and the Rockefeller brothers. It was a Harvard job, under Professor Raymond Vernon, and the results have been reported in a series of Harvard University Press books. They are of special interest to utility forecasters, for they apply to American communities of every size, everywhere, and particularly disclose new factors by which communities affect each other. ("*Metropolis 1985*," by Raymond Vernon, Harvard University Press.)

One of the main studies has been of population. For long, New York city had grown at about 10 per cent of the national rate. But it has developed postwar worries, such as the flight to the suburbs, and the unprecedented growth of California and Texas cities. There were slight but definite census drops in Manhattan.

The traditional 10 per cent ratio is

slightly off, but investigators found that it had been slipping a little for thirty years. Postwar changes, such as the flight to the suburbs, are not great, and the whole metropolitan region is gaining at pretty much the old ratio.

This metropolitan region is made up of a hard core, Manhattan and the boroughs, plus industrial towns in New Jersey, in which population is still steady, with an inner ring that is gaining population, and a further-out ring of New York, New Jersey, and Connecticut counties gaining most.

As far as population is concerned, New York is still the wonderful town that visitors would not want to live in, and will be still more wonderful when it is finished, if it ever is. Millions of residents want to live there, amid the office skyscrapers, and penthouse apartments, and freeways, and one-way streets. And find jobs that enable them to do so.

### Where to Look for a New York Job

NEW YORK also has a worry about jobs. It has been losing industry to other regions. Not so much as New





## PUBLIC UTILITIES FORTNIGHTLY

England, with its textile mills moving South, but fashion centers springing up as far as California have been taking garment concerns, as well as creating marketing competition.

The outlook for jobs is reported to be even better than that for population. It depends on where you look, what kind of education you chose, what your idea of a job may be.

Manhattan is definitely a place for the rich and the poor, with no great middle class. Not altogether in money, but for the "haves" and "have-nots" in ability. The upper class consists of management people, running the big corporations with headquarters there, often because the "brass" wants to live there. The lower classes are office workers to staff their organizations.

Manufacturing and wholesaling are lagging, but paper work is increasing. So, despite computers and office automation, such jobs are to be found all the way from Wall Street to the mid-town skyscrapers. Insurance, advertising, publishing, agencies of many kinds, advisory services, research services specializing in everything from chemistry to statistics, and mostly new and thriving, offer a bewildering array of employment and careers.

**A** FACT about New York jobs, to be explored in other communities, is that about two out of every three jobs are local, and steady, and offer opportunities for advancement.

The beer driver is cited as typical. Once he was a huge German, hustling heavy barrels, and there was a revival song about the magnificent matched teams that drew the long beer truck, running something

like "The brewer's big horses won't make a monkey out of me . . ."

Towns have these local jobs everywhere, drivers, barbers, waiters, laundry workers, hotel staff, and entertainers if, like New York, they have tourist trade. In Manhattan they are three out of every four workers, and in the central core, two out of three.

These local jobs put a premium on brains. They are competitive, constantly being improved, cutting expenses. Today's beer driver is no giant, hired for his capacity to drink with the barkeep as well as his brawn, but is a meticulous little fellow, with a panel truck, a hand truck to wheel in small cases of bottled beer, an accountant keeping track of his customers' stocks. He has been put through a training school to sell the barkeep new drinks—vodka cocktails. What Gus, the old-time beer driver, would have said about vodka would have been in low German.

### The Underlying R&D Granite

**I**MPORTANT to community builders everywhere, and probably new to them, is the discovery by these New York investigators that the city has a high concentration of creative enterprise.

This is something like the basic geological gneiss. It is composed of small enterprises, with slender capital and few workers, but with ideas for new goods. They are attracted to New York for "shared facilities." Loft space furnishes the modest rented quarters they need. They cannot afford to own the machinery needed for some of their work, but it is easily rented, and subcontractors take their work out.

They would be attracted wherever these

## LET TOWNSFOLK LOOK OVER THE FORECASTER'S SHOULDER

shared facilities are available, and in New York they have the attraction of a common market to which buyers come, and to whom they can show their products. In New York, this kind of business makes new jobs at a rate faster than the national average.

When these creative enterprises succeed, evolve a product, find a market, they are likely to move elsewhere. Their process has to be standardized, for mass production. Their costs have to come down to a level lower than those of the experimental period. They go into depressed New England, or Pennsylvania, or the South, for taxes and other easements as well as wages. They will also go to some locality where specially skilled workers are to be found.

This musical chairs, this fluidity of present-day industry, has its advantages for community builders, may bring them new industries, and is also likely to take them away. It is one of the new yardsticks.

### Straws in the Wind

THAT it is worth while to let townspeople look over the forecaster's shoulder is indicated by stray items in the news, showing trends.

Business is trying to be understood. A southern utility company, to show that it is not polluting its river, keeps an aquarium to prove that if fish can live in the river water . . .

A chemical company with pollution, tax, and other difficulties, and town feeling that it would be better without the company, changed this feeling by having a survey made and publishing the results.

At Gary, Indiana, a strong sentiment for city ownership of the water supply,

based on charges that rates were too high, and the water of a private company bad, was changed by a brief, intense, professional educational campaign, comparing water rates in other cities of the state. While admitting that, a few years before, the water *had* smelled and tasted bad, and been clouded with sediment, the water company had installed modern filtering equipment, and it was now high-grade.<sup>1</sup>

IN Louisiana a complicated telephone rate case got into the courts, which decided that the rates were not just or reasonable, and a new survey was ordered. Among those supporting the company's case was the telephone employees' union, which filed a brief as a "friend of the court."<sup>2</sup>

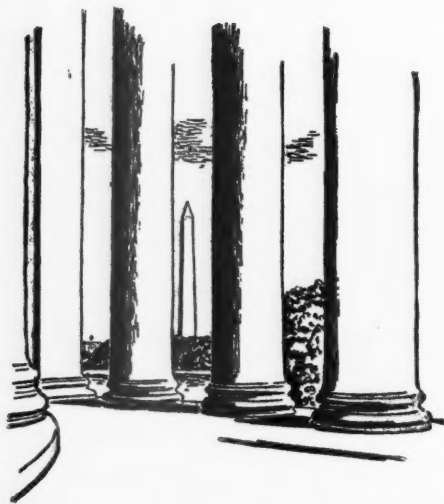
Episodes where unions and employers see problems eye to eye are reported, and are sometimes amusing, as in the case where a New York clothing manufacturer moved his business South for lower wages. He had worked for years under a union contract with a specific clause prohibiting his moving out of the state. The state supreme court held that this contract was valid, ordered him to move back, and awarded the union a substantial amount of lost wages.

In the spirit of forgiving and forgetting, the union agreed to accept one-fifth of this award, not as lost wages, but as "vacation benefits."

There are straws in the wind showing that it is well worth while to let citizenry look over management's shoulders.

<sup>1</sup> "How a City Changed Its Mind," by Ruby Proctor, PUBLIC UTILITIES FORTNIGHTLY, August 4, 1960, Vol. 66, No. 3, p. 159.

<sup>2</sup> *Telephony*, January 23, 1960.



### *Reorganizing the Regulatory Commissions*

**S**HORTLY after Easter President Kennedy was scheduled to send to Congress a message, if not a detailed plan, on what he expected to do about reorganizing the regulatory commissions. At the same time, it was believed in many quarters the President would reaffirm the support given by his predecessor, President Eisenhower, to the setting up of a permanent Conference on Administrative Procedures, headed by Chief Judge E. Barrett Prettyman of the U. S. circuit court of appeals for the District of Columbia.

There is a noticeable difference, however, between earlier speculation about possible White House control over regulatory agencies and what seems to be a subsequent composition of views on the subject—as between the White House and Congress. The recent bill in the House (HR 5868) to increase the FPC from five to seven members, the term to seven years, and full presidential authority over the chairman, is one straw in the wind. Opposition registered by Senator Carroll (Democrat, Colorado) to any idea of a

## Washington and the Utilities

White House “czar” over the regulatory commissions is another straw.

If these seem like an ostensible victory for the congressional brand of “oversight,” it is well to bear in mind that the President has the appointive power and, as in the case of Franklin Roosevelt and the “Nine Old Men” of the prewar Supreme Court, the appointive power has a way of coming to the top—given enough time and persistence.

**R**EPRESENTATIVE Harris’ (Democrat, Arkansas) recent announcement that he would head the new permanent House Subcommittee on Regulatory Agencies suggests that Congress is still in the driver’s seat as far as exercising control over the regulatory commissions is concerned. Harris has been moving to consolidate the congressional position in this area ever since the White House released the Landis report proposing, as its major recommendation, that a White House “Overseer” to supervise the work and progress of the regulatory commissions should be set up.

President Kennedy, himself, as early as February 8th indicated some doubt

## WASHINGTON AND THE UTILITIES

about carrying out this proposal of his principal adviser on this subject, James M. Landis, into effect. Kennedy said then that he was "not completely sure" it would be wise to set up a new executive office to oversee the regulatory agencies.

### The House Group Takes Over

THEN there was obvious resistance in Congress to any attempt of the executive branch to take over supervisory control of the commissions which Congress has heretofore reserved to itself. "I have no intention," Harris said on March 3rd, "of abandoning or neglecting the responsibility of the Committee on Interstate and Foreign Commerce in this important field." The new subcommittee will be similar to the old "Legislative Oversight" group, except that its chief counsel, Robert W. Lishman, and a former member very critical of utilities, Representative Dingell (Democrat, Michigan), will not continue with the new group. Other members include: Democrats—Rogers (Texas), Flynt (Georgia), Moss (California), Rogers (Florida); Republicans—Bennett (Michigan), Springer (Illinois), Younger (California), and Thomson (Wisconsin).

All this does not mean that the whole Landis report program for White House supervision will be dropped. But for the present it may mean that the importance and influence of the White House Overseer will be downgraded a little, as compared with the House subcommittee. What may result could simply be another White House assistant to look after the regulatory agencies for the information of the President, but with no two-way policy-making influence.

As of the end of March, Congress was set to complete the enactment of the extension of the Agency Reorganization

Act to 1963. Under this bill the President, among other changes, could reorganize agencies (subject to veto) so as to retain full control over the appointment of the chairman of any agency and the retention of the chairmanship could be at the pleasure of the President.

Another possibility in the forthcoming Kennedy reorganization pattern was a recommendation for reorganization of the Federal Power Commission which may contain a proposal approved by the former House Subcommittee on Legislative Oversight for splitting the gas and electric regulatory functions of the FPC into separate agencies. There was even a third possibility that the President may use his reorganization powers to make additional appointments to the FPC. As already noted the Harris Bill would increase the FPC membership from five to seven.

### Monthly Progress Reports

A PEACEFUL appearance was essayed after Harris had announced his subcommittee. Congressional leaders sought to consolidate a unified front with the White House on further steps to be taken on overall controls of the reorganization. Chairman Harris of the new permanent House Subcommittee on Regulatory Agencies reassured the House on March 16th that there were now no essential differences between the White House and the House group in this area. He pointed out that while regulatory commissions are "an arm of Congress" with "only such authority as the Congress has given them," nevertheless the President is charged with "seeing that the laws are faithfully executed" and therefore has the right to full information about their operations. Harris' references were to the recent Kennedy request for monthly reports from the various regulatory commission chairmen.



## PUBLIC UTILITIES FORTNIGHTLY

This White House memorandum called for short and pithy monthly progress reports by their agencies. "The President is most interested," the memorandum said, "in being kept closely informed on important policy and administrative action taken or proposed. He is particularly interested in having major problems of the agency flagged for his attention." The object of these reports will be for the personal information of the President. It was made clear that they should not be bogged down by statistics or generalities.

The memorandum said these reports "should be kept as specific, incisive, and brief as possible—preferably but not necessarily under two pages. Matters highlighted in these summaries and of particular interest to the President can later be more extensively developed at his request." This is believed to be the first time in the history of the regulatory commission that they have been told to file up-to-date progress reports with the White House or Congress or anybody else. Kennedy took care to avoid any criticism that he was trying to influence the pending decisions by excluding them from the reports.

ON March 22nd, Representative William Avery (Republican, Kansas) called for a congressional review of relationships between the Kennedy administration and the federal regulatory agencies. Avery said such a review should be made following disclosures that "President Kennedy had dispatched a White House memorandum to every regulatory commission chairman directing him to report back each month on agency work by means of a secret memorandum."

The Kansan said the episode recalled the case of former Presidential Assistant Sherman Adams in the Eisenhower ad-

ministration. "You will recall the demand for his (Adams') resignation was based on a written inquiry made by Mr. Adams to the Federal Trade Commission on the status of one case pending before the agency," Avery said in a statement. "The Democratic-controlled Committee on Legislative Oversight alleged this inquiry . . . carried with it a plain implication to attempt to exert executive influence."

Avery said there was no need now to debate the justification or lack of it in the indictment of Adams. Avery said Kennedy, however, had requested information from the agencies which was to include "not only the decisions made by the respective commissions during the preceding month, but also to include the proposed agenda for the month to follow."

"HAD this White House memorandum been made public, it would not have aroused so much apprehension among House members." But, Avery continued, it was brought to light "only by an unexpected news source." He added there was "considerable reason to be concerned about the White House attitude toward these agencies and their continued freedom in making decisions."

Avery noted that the agencies control awards of radio, television, air-line, and pipeline certificates—"many valued in the multimillion-dollar bracket."

"This intervention by the executive branch became of further concern," Avery said, when the White House said the monthly report would not be made public. "This action should at least result in a continued review of the executive-commission relationship by a congressional committee," he said.

### Strange Case of the FPC

WHILE all this was going on, the White House was having some dif-



## WASHINGTON AND THE UTILITIES

difficulties with the FPC. According to press reports, Chairman Kuykendall, an Eisenhower appointee, apparently refused to step down from that post so as to clear the way for a Kennedy designation of a new chairman. The White House had previously indicated that Joseph Swidler, Nashville attorney and for many years TVA counsel, would be the President's choice. Some opposition to the Swidler nomination has developed. Yet the President is faced with the legal question of whether he has authority to "demote" Kuykendall. To make a test of that Kennedy may have to send some name, whether Swidler or somebody else, to the Senate for confirmation. The difficulty involves a construction of the present law which clearly gives the President power to designate an FPC chairman, but is not so clear about his authority to remove him. Senate hearings on Swidler were slated for April 11th.

Even if the forthcoming reorganization plan of the President clarifies his authority to control the tenure of the FPC chairmanship, there is still the question of whether it could be retroactive so as to "demote" Kuykendall. No substantial opposition has appeared to the President's designation to the second vacancy on the FPC, Howard Morgan, former Oregon Public Utility Commissioner.

### *Change in AEC Regulatory Setup*

THE Atomic Energy Commission has announced plans to separate regulatory and promotional functions. For several years the question of reorganization has been under study and it is believed by AEC officials that the separation of the two functions will help insure regulatory independence, as well as speed

the regulatory process itself. The AEC has established the position of acting director of regulation, who will report to the five-man commission rather than to the general manager. Harold L. Price, formerly director of the division of licensing and regulation, has been named to the new position.

The Joint House and Senate Atomic Committee will hold hearings on various reorganization proposals this month. This group has issued a series of studies on a general overhauling of the AEC. (See, also, page 548.)

### *Federal Power Funds*

THE implementation of federal power policy statements by Interior Secretary Stewart L. Udall and his assistant, Kenneth Holum, have been turning up in the form of White House recommendations to Congress. President Kennedy has asked permission, for example, for the Reclamation Bureau to use previously approved funds to construct long-distance power transmission facilities between the Upper Colorado river basin and the Central valley in California.

On March 16th there was a White House announcement that Kennedy was seeking an additional \$100 million for the Rural Electrification Administration—over and above the Eisenhower budget program of new REA lending authority amounting to \$115 million for rural electrification, with a contingency fund of \$30 million. Mention was also made in the President's message to Congress that only one-third of our farms have modern telephone installations. He asked for \$350,000 to start planning Libby dam in Montana as part of the U. S. share in the U. S.-Canadian Treaty on Columbia basin development.



## Telephone and Telegraph

### *Satellite Business Open to All*

**I**N a speech at Raleigh, North Carolina, on March 22nd, Frederick R. Kappel, president of the American Telephone and Telegraph Company, stated that the Bell system is confident that it can develop a high-quality space communications system "in the shortest possible time." He indicated that it was his belief that what is now needed is some branch of government to launch this project so that the Bell system can begin tests. Underlining the Bell system's interest in this project, he stated that Bell would be glad to pay for the rockets which will be needed to place the satellites in orbit.

In answer to charges that AT&T may be attempting to establish a monopoly in space communications, Mr. Kappel stated as follows:

The creation of the satellite system we propose in order to do our public service job as it ought to be done would not under any circumstances preclude the development of other space communications systems. Space is a great big place and we don't expect to fill it.

He went on to express his belief that AT&T's plan offers the best means to serve the public's increased need in the

shortest possible time, assuring that the United States will lead the way in international communications. However, it is his belief that AT&T has the best system but that this would in no way prevent others from getting into the space communications field.

**T**HE space system proposed by Bell, Mr. Kappel indicated, would be a natural extension of present overseas communications services, just another way to get long-distance messages across the ocean. Ownership of the foreign terminal points would be retained by foreign agencies as is now the custom. Such a space communications system would also be available for use by all international "common carrier" companies in this country for any purpose that the FCC might authorize them to supply. Mr. Kappel stated that this could be done either through leasing arrangements or by the other companies participating in ownership of systems by sharing pro rata in the capital cost and operating expenses.

Also, Mr. Kappel said, "we would expect to obtain a very large part of the ground station equipment, and many of the elements of the satellites themselves, on a competitive basis from other companies. So there would be all kinds of op-

## TELEPHONE AND TELEGRAPH

portunity for the producers of electronic gear and many other products."

Space communications was only one of the Bell system developments discussed by Mr. Kappel.

"A telephone for your car would be as commonplace as power steering, though possibly 'optional at extra cost,'" he said.

He also foresaw the day when people will be able to see to whom they talk on the telephone.

### *Communications and Space*

SOME idea of the coming importance of space communications can be gleaned from the jurisdictional battle going on in government circles. The various military agencies have long been accused of feuding with each other over various matters and, to the casual observer, it often seems that more effort is wasted in defeating a friendly but rival military group, than is expended on the actual business of guarding against aggressors. At the moment the military groups are sparring to obtain favorable positions in the space race, with particular emphasis on that part of space exploration which will include communications. The civilian controlled National Aeronautics and Space Administration is also embroiled in the contest for dominance and the amount of activity alone reflects the coming importance of space communications for both the military and the civilian.

As reported in the last issue of the FORTNIGHTLY, Secretary of Defense Robert S. McNamara has ordered the Army, Navy, and Air Force to carry on "preliminary" space research. However, only the Air Force may carry projects forward through development and testing—except under unusual circumstances.

The House Science and Astronautics Committee has been conducting hearings

regarding the Defense Department's order. Representatives of the Army assured the committee of their support of the Defense Department's directive and Elvis J. Stahr, Jr., Secretary of the Army, stated that the directive would get "a little order out of a little chaos." Such statements as these cannot be construed to mean that the Army is happy about the Air Force's dominance in the space rôle; but it does evidence some spirit of co-operation in this vital area.

THE Air Force has assured the congressional group that it has no plans to swallow up the NASA, as some had feared. The hinted-at merger of NASA with the military was spoken of, says the Army, not as a statement advocating such an action but only as a recognition that such a possibility exists.

As the new order was outlined before the House group, conflicts on the question of whether specific projects were military or scientific would be resolved by a board created under the directive, by agreement between the Secretary of Defense and the director of NASA, or, ultimately, by the President.

When asked about possible military domination of civilian space efforts, Deputy Secretary of Defense Gilpatric stated that he did not believe the military should have control over NASA. He stated: "We have enough problems of our own. We don't need any more."

President Kennedy has recently appointed Edward C. Welsh to be executive secretary of the NASA council. This group was authorized by Congress in 1958, but was never actually put into operation by President Eisenhower. Mr. Welsh had been an assistant to Senator Symington (Democrat, Missouri) and is a graduate of Lafayette and Tufts College and the Ohio State University. It is

## PUBLIC UTILITIES FORTNIGHTLY

understood that Mr. Welsh has played a backstage rôle in numbers of Senate defense investigations and in legislative activities relating to space that have come before the Senate in the past eight years. The nomination of Mr. Welsh has already received committee approval and final Senate confirmation is expected to be a routine matter. Vice President Johnson will serve as the council chairman.

**I**N essence this space council was "pushed" as an idea by Democrats after Russia scored her first successful space shot. The 1958 Space Act, which incidentally created the NASA, directs the council to "develop a comprehensive program" for space which would provide co-operation between the civilian agency and the Defense Department.

Any effort to explore space, of necessity, involves communications. Military projects, although not primarily concerned with communications as such, are bound to make contributions to the essentially civilian satellite program, underscoring the need for co-operation. NASA officials have even called upon the nations of the world to join in a scientific assault on the mysteries of outer space. James E. Webb, administrator for NASA, has stated:

I would like to emphasize that the extensive activities which the agency is now undertaking are really but a preliminary effort to the world-wide utilization of the benefits which will inevitably flow from the programs.

The interweaving of interests in space communications is sure to continue. Military experts are known to be concerned with the development of rockets which could knock down satellites of an enemy nation. It can be expected that foreign

countries are working on developments which would defend such satellites.

**I**F present policies continue, there appears to be no immediate danger that the federal government will take over the projected civilian communications satellite network. The House Science and Astronautics Committee, under the chairmanship of Overton Brooks (Democrat, Louisiana), has stated that his group will look into the communications satellite program, with specific reference to the rôle that private industry should play in the development of such a system.

Just recently there have been additional entries in the satellite race with General Telephone & Electronics Corporation requesting the Federal Communications Commission for microwave frequencies under which it could operate space satellites. General Telephone was joined in the application by Radio Corporation of America (RCA) and Lockheed Aircraft Corporation.

American Telephone and Telegraph Company and General Electric Company already have made their interest in the satellite program known. AT&T has been awarded frequencies for tests on an experimental project which is envisioned as a system of 40 or more satellites, costing some \$170 million. The projected General Electric system would be more expensive, costing an estimated \$280 million. No cost for the General-RCA-Lockheed program has been announced, but estimates range between \$110 and \$200 million.

The chances that a number of companies will remain active in the civilian space communications field have been increased by a Justice Department announcement that antitrust laws may not permit any one company system to gain control over a future network.

# Financial News and Comment

By OWEN ELY



## *Atomic Power Costs Nearly Twice as Much as Most Fuel-generated Power*

THE Office of Operations Analysis and Forecasting of the Atomic Energy Commission has released a revised report (TID-8531) on the cost of nuclear power, replacing TID-8506 published in July, 1959.

Table 1, page 1, shows the estimated expenditures for *research and development* by the AEC and by private companies, for principal plants. Unfortunately, the table is incomplete, Dresden being omitted for example. Summarized, the results are as shown in table at top of page 540.

Table 2 shows detailed construction costs by major categories for certain plants, including the SENN plant in

Italy and CANDU in Canada. (Here again Dresden is not available.) This gives a breakdown of construction costs as between land, structure, reactor equipment, turbogenerator and accessory equipment, plus miscellaneous plant, interest during construction, contingencies, and escalation. Of greater interest is Table 3, giving the same detail on a per kilowatt basis, from which the averages shown in table at bottom of page 540 were derived.

TABLE 4 also gives a long list of construction costs, including a large number of foreign plants. (Data on Russian and other plants behind the Iron Curtain do not appear to be available.) In general, foreign plants seem to run less than U. S. costs, presumably due to the labor factor. There is a wide variation in kilowatt cost—from \$280 for Dresden to \$3,730 for the McMurdo Sound plant—but the latter is a very small unit for use in the Antarctic. The average cost for larger plants in the U. S. is \$524 per kilowatt compared with \$367 in the United Kingdom and about the same in Italy; Canada is \$410, France \$417, and Japan \$540.

Table 4 does not present separate figures for the amount of atomic power capacity being built in different countries, but we have totaled the figures as shown in table at top of page 542.

### DEPARTMENT INDEX

	Page
Atomic Power Costs Nearly Twice as Much as Most Fuel-generated Power	539
Calendar of Proposed Utility Security Offerings .....	541
Chart—Yields on Utility Securities ..	543
Liberalized Depreciation—A Stone & Webster Compilation .....	544
California Commission Orders Past Deferred Taxes Taken Out of Rate Base .....	544
Table—Financial Data on Electric Utility Stocks .....	545, 546, 547



# PUBLIC UTILITIES FORTNIGHTLY

Type of Plant	No. of Plants	Approx. Millions Spent		
		AEC	Other	Total
Pressurized Water .....	2	\$ 5	\$11	\$ 16
Boiling Water .....	3	14	—	14
Gas-cooled .....	2	26	18	44
Heavy Water-cooled .....	1	14	2	16
Organic .....	1	4	—	4
Sodium Graphite .....	1	16	—	16
Fast Breeder .....	1	4	21	25
	11	\$83	\$52	\$135



Table 5 (page 11) presents an estimate of the increased costs of construction as compared with the original estimates. In only one case, the small Vallecitos plant, was the actual cost under the original estimate. In other cases there were substantial increases, Shippingport costing \$73 million against the original estimate of \$48 million; Indian Point \$100 million *versus* \$53 million; Yankee \$52 million *versus* \$33; Fermi \$56 *versus* \$45; and Hallam \$45 million *versus* \$25. A detailed explanation of the increased cost of Indian Point (Consolidated Edison) indicates that \$9 million of the increase was in the conventional portion of the plant, and \$29 million in the nuclear portion; the amount of basic research and development was much greater than originally estimated, and plans were modified a number of times.

ACCORDING to table 6 (page 16) efficiencies for larger atomic power plants

range from about 24 to 35 per cent, temperatures from 450 to 1,000° Fahrenheit, and pressures from 300 to 1,500 psi. The plant in the U. S. with the best indicated thermal efficiency (34.8 per cent) is Peach Bottom (a gas-cooled plant), compared with 28.7 per cent for Dresden, 25.8 per cent for Indian Point, and 28 per cent for Yankee. Advantages claimed for the various types of reactors are discussed in the report.

The cost of money for financing private atomic plants is estimated at 6.75 per cent as of January 1, 1960, although municipalities and co-operatives would have lower costs. Cost of fuel (U-235) is discussed in some detail. On page 35 total generating costs are estimated to be in the ranges, in mills per kilowatt-hour for pressurized water and boiling water reactors (with capacity of about 150 megawatts) compared with conventional plants using fossil fuels, as shown in the table at the bottom of page 542.



Type of Reactor	No. Of Plants	Average Cost Per Kilowatt			Per Cent of Reactor Cost to Total
		Cost of Reactor, Etc.	Other Const., Etc.	Total	
Pressurized Water .....	3	\$110	\$255	\$365	30%
Boiling Water .....	6	171	322	493	35
Gas-cooled .....	2	268	367	635	42
Heavy Water-cooled .....	1	371*	354	725	51
Organic .....	1	241	799	1,040	23
Sodium Graphite .....	1	217	313	530	41
Fast Breeder .....	1	189	321	510	37

\*Costs for the two plants vary quite widely: The reactor cost for 200-Mw CANDU (Canada) is only \$114 compared with \$628 for 17-Mw Carolinas-Virginia.

# FINANCIAL NEWS AND COMMENT

## CALENDAR OF PROPOSED UTILITY SECURITY OFFERINGS

April 10, 1961 to August 31, 1961

<i>Date of Bidding Or Sale</i>	<i>Approx. Amount (Millions)</i>		<i>Method Of Offering</i>	<i>Moody Rating†</i>
<i>Bonds and Debentures</i>				
4/11	\$45	New England Telephone & Telegraph .....	C	—
4/20	12	Orange & Rockland Utilities .....	C	Baa
4/25	15	Iowa-Illinois Gas & Electric .....	C	Aa
4/26	7	Madison Gas & Electric .....	C	Aa
4/—	20	General Telephone of California .....	C	A
4/—	5	New Bedford Gas & Electric Light .....	—	Aa
5/2	50	Bell Telephone of Pennsylvania .....	C	Aaa
5/3	15	Washington Gas Light .....	C	A
5/9	33(?)	Peoples Gas, Light & Coke .....	C	A
5/11	7	Sierra Pacific Power .....	C	Baa
5/16	25	New York State Electric & Gas .....	C	Aa
5/16	12	Arkansas Power & Light .....	C	A
5/18	9	Interstate Power .....	C	A
5/23	30	Michigan Consolidated Gas .....	C	A
5/25	15	New Orleans Public Service .....	C	A
5/—	30	Transcontinental Gas Pipe Line .....	N	Baa
5/—	10	Pennsylvania Electric .....	—	Aa
6/1	30	Columbia Gas .....	C	A
6/—	18	Massachusetts Electric .....	C	—
6/6	30	Michigan-Wisconsin Pipeline .....	C	Baa
6/8	20	Brooklyn Union Gas .....	C	A
6/13	30	Virginia Electric & Power .....	C	Aa
6/15	25	Southern Electric Generating .....	C	A
6/20	50	Consolidated Edison .....	C	Aa
—	12	Pennsylvania Electric .....	C	Aa
—	20	Indiana-Michigan Electric .....	C	Aa
—	30	Consumers Power .....	—	Aaa
—	36	Arizona Public Service .....	—	—
—	5	Community Public Service .....	C	A
—	25	Long Island Lighting .....	C	A
—	20	Baltimore Gas & Electric .....	—	Aaa
—	10	Missouri Public Service .....	N	—
—	32	Trunkline Gas .....	N	—
8/—	20	Northern States Power .....	N	Aa
8/—	12	General Telephone of Florida .....	N	A
8/—	5	General Telephone of Illinois .....	N	—
<i>Preferred</i>				
—	16	Central Hudson Gas & Electric .....	—	—
—	20	Consumers Power .....	—	—
—	18(a)	Baltimore Gas & Electric .....	—	—
—	10	Trunkline Gas .....	N	—
<i>Common Stock—Offered to Public</i>				
6/—	20	Northern Illinois Gas .....	—	—
<i>Common Stock—Offered to Stockholders</i>				
4/—	(?)	Duke Power .....	—	—
4/25	(?)	New England Telephone & Telegraph .....	—	—
5/3	(?)	Washington Natural Gas .....	N	—
5/18	4	Interstate Power .....	—	—
—	20	Public Service of Colorado .....	—	—

(a) Bonds may be issued instead. †Preliminary, or rating of similar issues. C—Competitive. N—Negotiated.

# PUBLIC UTILITIES FORTNIGHTLY

## TOTAL MW CAPACITY OF ATOMIC POWER PLANTS

	<i>Operable</i>	<i>Being Built</i>	<i>Planned</i>	<i>Total</i>
United Kingdom .....	12	1,902	1,130	3,044
United States .....	258	864	142	1,264
France .....	—	230	300	530
Italy .....	—	526	—	526
U.S.S.R. ....	5	340	100	445
Canada .....	—	20	200	220
Japan .....	—	158	12	170
Czechoslovakia .....	—	150	—	150
E. Germany .....	—	70	—	70
W. Germany .....	—	30	—	30
Belgium .....	11	—	—	11
Total .....	286	4,290	1,884	6,460



ACCORDING to these data, the lowest atomic power costs are more than twice as much as the lowest conventional plant costs, for fixed charges; fuel cost is about 40 to 75 per cent higher; and operation and maintenance are just twice as high. However, the disparity between atomic and conventional generating costs is much less in the areas where coal or other fuels must be carried a considerable distance to the power plant. Areas where fuel costs are over 35 cents per million Btu include New England, New York, New Jersey, Maryland, Delaware, and part of Pennsylvania. The disparity between total generating cost for the most efficient nuclear plant (11 mills per kilowatt-hour) as compared with the least efficient conventional plant (9.5 mills) is only about 16 per cent. The report concludes:

The goal that nuclear power must attain to become economically competitive in [high-cost] regions and elsewhere will depend on prices of fossil fuels in the future. Such prices have

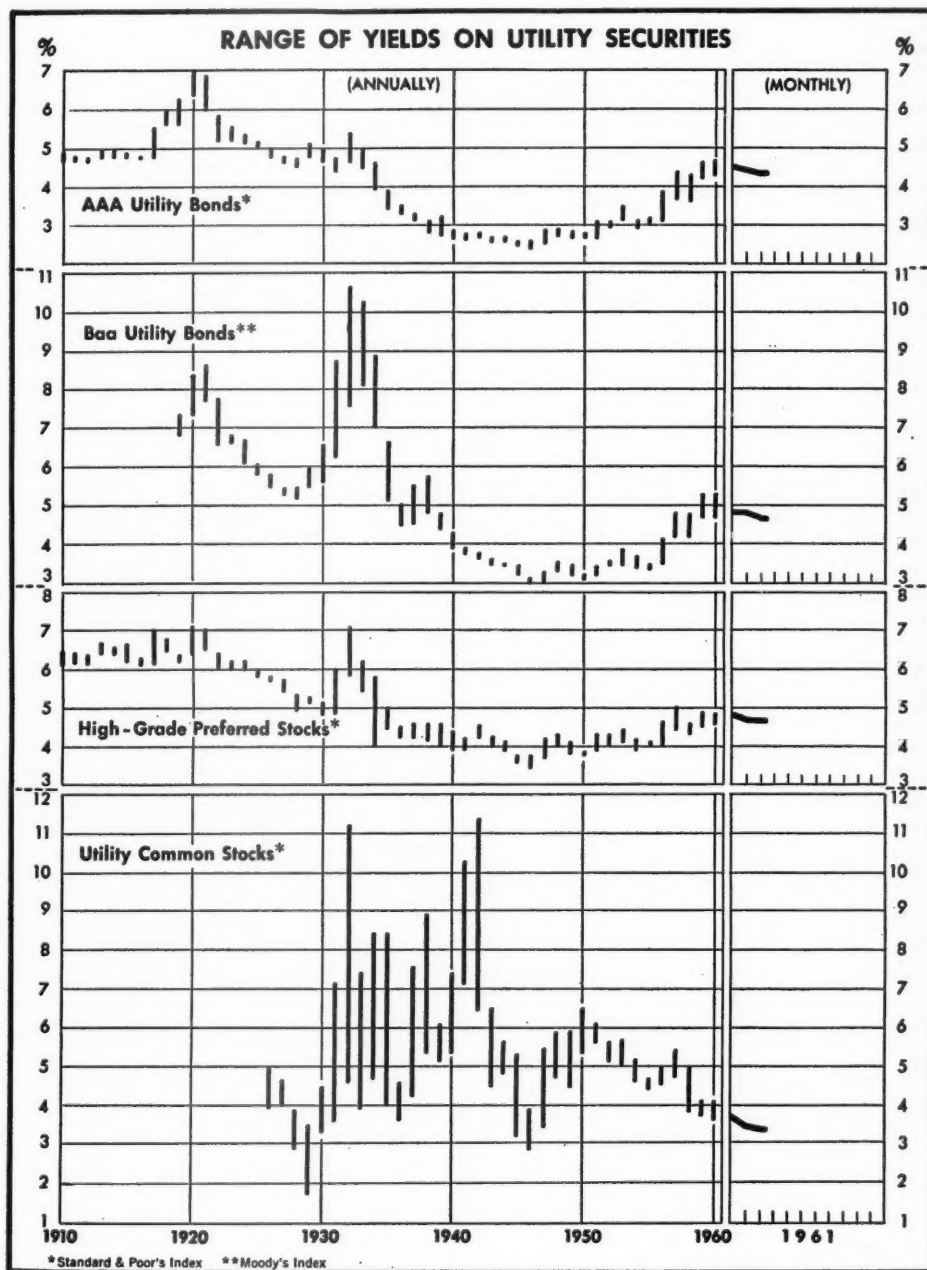
fluctuated considerably in the past. Several recent studies of domestic energy supplies indicate no basis, from the standpoint of availability of fossil fuels, for an increase in the prices of coal and oil in the United States during the next decade or so, except for effects of rises in the general price level. This would mean that nuclear power must depend primarily on reductions in costs resulting from research, development, engineering, and production activities to become economically competitive with power from fossil fuels during that period.

One factor which may help reduce atomic power costs is that experience with operating reactors shows that there may be a considerable increase in power potential above the design (name-plate) capacity. Thus EBWR (experimental boiling water reactor) has achieved three times its original level of 20 megawatts; and an increase to 100 megawatts or five times original capacity is anticipated with



	<i>Atomic Power Plants</i>	<i>Conventional Plants</i>
Fixed Charges on Construction Cost ...	6.5 — 10.0	3.0 — 4.5
Fuel Costs .....	3.5 — 5.5	2.0 — 4.0
Operation and Maintenance .....	1.0 — 2.0	0.5 — 1.0
Total Generating Cost .....	11.0 — 17.5	5.5 — 9.5

# FINANCIAL NEWS AND COMMENT



## PUBLIC UTILITIES FORTNIGHTLY

an additional cost of \$2.1 million. Much the same is true for Vallecitos. Shippingport's high-cost can also be reduced by installing additional capacity. It is possible that Dresden's cost may drop from \$280 to \$233 per kilowatt with a \$7.7 million additional investment, but the plant is currently out of operation because of defects in control rods.

### *Liberalized Depreciation—A Stone & Webster Compilation*

THERE have been a number of studies on accelerated depreciation from time to time, but probably the most complete and up to date is the compilation prepared by Stone & Webster on "Rate and Accounting Treatment of Liberalized Depreciation and Accelerated Amortization," dated January, 1961, which is being distributed to public utility executives.

The study summarizes, by jurisdictions, the decisions of all state and federal commissions. It discloses that in the important area of rate fixing, 15 state commissions and the Federal Power Commission have "normalized" and 16 state commissions have "flowed through" the reduction in income taxes occasioned by the use for federal income tax purposes of a liberalized method of depreciation. Courts of final appeal in three jurisdictions have ruled for "flow through" and similar courts in three jurisdictions have ruled for "normalization."

Table I, "The Summary of Rate Treatment," shows the practice by each federal and state commission as to normalization or flow through and also indicates whether there has been a final court test of the commission order. Commissions are listed in two groups, depending on which method is used. The column "Normalization" indicates whether there is full normalization; whether accumulated balance

sheet credits are deducted from the rate base; and whether the effect of interest-free funds on capital costs is considered in fixing rate of return.

Table II, the "Summary of Accounting Treatment," shows the identity of balance sheet credits resulting from normalization. In some states such as California there has been only a rate order but not an accounting order. The position of the American Institute of Certified Public Accountants is indicated along with that of the FPC and the SEC. The compilation then devotes some 50 pages to comments on the various decisions, opinions, or orders. Appendices A-D cover: Accounting Research Bulletin 44 and Related Material issued by the AICPA; FPC Orders 203-4; the SEC Statement of Administrative Policy; and the ICC Notice to All Carriers.

It is to be hoped that this study can be brought up to date at least once a year, since it furnishes a handy and complete source of information on the subject.

### *California Commission Orders Past Deferred Taxes Taken Out of Rate Base*

THE public utilities commission of California, in Decision No. 59926 last April, ordered the use of "flow through" of tax savings resulting from liberalized depreciation, for rate purposes. In a recent decision, No. 61711, the commission held that the deferred taxes previously transferred to the balance sheet (before the adoption of flow through) "represent amounts collected from the ratepayers in excess of the amounts allowed by the commission in fixing rates." The utilities in the state which had earlier been using liberalized depreciation with normalization are now ordered to transfer the accumulated amounts of deferred



# FINANCIAL NEWS AND COMMENT

taxes to depreciation reserve. This means, of course, that these deferred taxes will now be automatically deducted from the rate base.

THE former split in the commission's ranks continued, with three commissioners issuing the order while two dissented. The dissenting commissioners held that the new action would serve no useful purpose but would discourage utilities from continuing to use liberalized depreciation, so that consumers might later lose the benefits (ratewise) of "flow through." They also stated that the new order would create confusion and misunderstanding.

A concurring opinion was issued by two of the majority commissioners who had joined with Commissioner Fox in issuing the order, and this apparently represented an answer to the dissenting opinion. This opinion stated:

The minority has an erroneous con-

ception of what was meant by flow through as it was contemplated and urged before the commission [in Decision No. 59926] by the advocates thereof. There can be no doubt that true flow through results only when both income tax expense and rates are determined on the basis of the use of liberalized depreciation. When . . . tax savings find their way into income accounts, it may be said that flow through occurs, but not the kind of flow through which was advocated in this case.

May it be remarked that this also leaves the reader somewhat confused?

Wisconsin is the only other state in which the commission has required transfer of tax deferrals to the depreciation reserve, although exclusion of the item from the rate base has been ordered in some other states, such as Georgia, Illinois, and others.



## FINANCIAL DATA ON ELECTRIC UTILITY STOCKS

Approx. Rev. (Mill.)			3/21/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	% Incr. in Share Earnings Recent	5-yr. Aver.	Price- Earnings Ratio	Div. Pay-out	Approx. Book Value
\$159	S	Allegheny Power System .	44	\$1.70	3.9%	\$2.37Ja	—%	3%	18.6	72%	\$18
338	S	American Elec. Power . . .	66	1.88c	2.9	2.46F	4	8	26.8	76	24
63	O	Arizona Pub. Serv. . . . .	64	1.20	1.9	*2.01Se	*11	* 6	*31.8	60	18
13	O	Arkansas Mo. Power . . . .	24	1.00	4.2	1.51De	10	3	15.9	66	10
40	S	Atlantic City Elec. . . . .	41	1.20	2.9	*1.58Ja	* 9	* 9	*25.9	76	12
175	S	Baltimore G. & E. . . . .	30	1.00	3.3	1.48De	5	8	20.3	67	13
9	O	Bangor Hydro-Elec. . . . .	49	2.20	4.5	3.34Ja	6	9	14.7	66	30
7	O	Black Hills P. & L. . . . .	37	1.60	4.3	2.63Ja	2	3	14.1	61	21
124	S	Boston Edison . . . . .	74	3.00	4.1	4.10De	11	4	18.0	73	52
34	A	Calif. Elec. Power . . . . .	22	.84	3.8	*1.04De	*D10	* 3	*21.2	81	12
25	O	Calif. Oreg. Power . . . . .	51	1.60	3.1	*2.08De	*15	*—	*24.5	77	27
11	O	Calif. Pac. Util. . . . .	25	.90	3.6	1.30Ja	D4	1	19.2	69	13
76	S	Carolina P. & L. . . . .	53	1.48	2.8	2.24Ja	2	6	23.7	66	21
37	S	Central Hudson G. & E. . .	31	1.00	3.2	*1.47De	* 4	* 8	*21.1	68	14
27	O	Central Illinois E. & G. . .	46	1.44	3.1	2.40Ja	9	7	19.2	60	16
45	S	Cent. Ill. Light . . . . .	42	1.52	3.6	2.13F	D11	4	19.7	71	19
60	S	Cent. Illinois P. S. . . . .	66	2.12	3.2	3.03Ja	11	7	21.8	70	20
22	O	Central Louisiana Elec. . .	31	1.00	3.2	1.28De	14	7	24.2	78	11
44	O	Cent. Maine Power . . . . .	31	1.40	4.5	*2.03F	*18	*	*15.3	69	21
160	S	Cent. & South West . . . .	41	1.02	2.5	1.44Se	4	6	28.5	71	11
12	O	Cent. Vermont P. S. . . . .	22	1.08	4.9	*1.43De	* 3	* 2	*15.4	76	13
153	S	Cincinnati G. & E. . . . .	43	1.50	3.5	2.23De	14	3	19.3	67	16
8	O	Citizens Util. "B" . . . . .	22	.60	2.7	.78Se	14	6j	28.2	77	4

# PUBLIC UTILITIES FORTNIGHTLY

Approx. Rev. (Mill.)	(Continued)	3/21/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	% Incr. in Share Earnings Recent	3-yr. Aver.	Price- Earnings Ratio	Div. Pay- out	Approx. Book Value
130 S	Cleve. Elec. Illum. ....	59	1.80	3.1	2.97De	1	9	19.9	61	26
8 O	Colo. Cent. Power ....	37	.75	2.0	1.30De	21	10	28.5	58	12
57 S	Columbus & S. O. E. ....	59	1.80	3.1	3.01Ja	22	6	19.6	60	25
469 S	Commonwealth Edison ....	78	2.00h	4.9h	3.85Ja	7	8	20.3	52	35
17 A	Community P. S. ....	36	1.00	2.8	1.53De	3	5	23.5	65	13
89 O	Conn. Lt. & Power ....	29	1.20	4.1	*1.48F	* 4	* 7	*19.6	81	15
615 S	Consol. Edison ....	79	3.00	3.8	*3.88De	*D1	* 6	*20.4	77	49
281 S	Consumers Power ....	65	2.60	4.0	3.44Ja	D9	2	18.9	76	36
96 S	Dayton P. & L. ....	68	2.40	3.5	3.34De	4	—	20.3	72	31
55 S	Delaware P. & L. ....	46	1.20	2.6	1.66De	4	7	27.7	72	14
279 S	Detroit Edison ....	54	2.20	4.1	2.70F	13	2	20.0	81	28
156 A	Duke Power ....	54	1.60	3.0	2.20De	2	10	24.5	73	20
105 S	Duquesne Light ....	28	1.18	4.2	*1.52De	* 5	* 5	*18.4	78	10
38 O	East. Util. Assoc. ....	43	2.20	5.1	2.54Ja	D14	4	16.9	87	26
3 O	Edison Sault Elec. ....	17	.90	5.3	1.11Se	D20	6	15.3	81	9
19 O	El Paso Electric ....	54	1.16	2.1	1.75Ja	2	8	30.9	66	12
13 S	Empire Dist. Elec. ....	39	1.52	3.9	2.00De	10	7	19.5	76	16
68 S	Florida Power Corp. ....	44	.88	2.0	1.30De	15	11	33.8	68	11
173 S	Florida P. & L. ....	70	1.00	1.4	2.11De	10	15	33.2	47	17
4 O	Florida Pub. Util. ....	26	.72d	2.8	1.28Se	5	9	20.3	56	10
205 S	General Pub. Util. ....	28	1.16	4.1	*1.61De	* 2	* 3	*17.4	72	15
7 O	Green Mt. Power ....	24	1.10	4.6	1.45De	12	4	16.6	76	13
86 S	Gulf States Util. ....	38	1.00	2.6	1.32Ja	D3	5	28.8	76	13
54 A	Hartford Electric ....	70	3.00	4.3	*3.67De	* 1	NC	*19.1	82	43
31 O	Hawaiian Electric ....	74	2.50	3.4	3.68De	6	5	20.1	68	36
116 S	Houston L. & P. ....	97	1.60	1.6	3.29F	8	5	29.5	49	24
37 S	Idaho Power ....	54	1.80	3.3	2.58De	11	6	20.9	70	29
110 S	Illinois Power ....	67	2.20	3.3	2.96Ja	9	11	22.6	74	20
54 S	Indianapolis P. & L. ....	57	1.90	3.3	2.64Se	10	9	21.6	72	18
34 S	Interstate Power ....	22	.95	4.3	1.19De	2	4	18.5	80	9
53 S	Iowa Elec. L. & P. ....	49	1.80	3.7	2.69F	10	5	18.2	67	21
51 S	Iowa-Illinois G. & E. ....	45	1.90	4.2	2.60Ja	D2	2	17.3	73	20
51 S	Iowa P. & L. ....	41	1.60	3.9	2.20De	7	4	18.6	73	20
42 O	Iowa Public Service ....	23	.88	3.8	1.37F	16	5	16.8	64	11
17 O	Iowa Southern Util. ....	35	1.48	4.2	2.07Ja	D5	4	16.9	71	21
64 S	Kansas City P. & L. ....	65	2.32	3.6	3.31Ja	7	6	19.6	70	29
37 S	Kansas G. & E. ....	60	1.68	2.8	2.80F	2	8	21.4	60	23
57 S	Kansas P. & L. ....	46	1.48	3.2	2.39De	—	7	19.2	62	19
49 O	Kentucky Util. ....	44	1.60	3.6	2.73De	—	6	16.1	59	22
8 O	Lake Superior D. P. ....	26	1.28	4.9	1.77N	NC	4	14.7	72	17
145 S	Long Island Ltg. ....	47	1.40	3.0	*2.16De	* 7	* 8	*21.3	64	20
71 S	Louisville G. & E. ....	59	1.52	2.6	2.69De	9	8	21.9	56	22
13 O	Madison G. & E. ....	32	1.00	3.1	2.02De	10	4	15.8	50	39
5 A	Maine Pub. Service ....	26	1.24	4.8	1.47Ja	D2	4	17.7	84	14
8 O	Michigan G. & E. ....	85	2.00e	5.6e	5.75Se	4	12	14.8	35	29
215 S	Middle South Util. ....	32	1.05	3.3	1.52Ja	8	9	21.1	69	14
31 S	Minn. P. & L. ....	42	1.60	3.8	2.50F	13	5	16.8	64	21
16 S	Missouri P. S. ....	24	.72f	5.0	1.13Ja	9	5	21.2	64	8
9 O	Missouri Util. ....	33	1.44	4.4	2.00De	19	2	16.5	72	18
46 S	Montana Power ....	34	1.12	3.3	*1.49Se	* 6	* 8	*22.8	75	9
172 S	New England Elec. ....	23	1.08	4.7	1.35De	1	3	17.0	80	15
52 O	New England G. & E. ....	29	1.24	4.3	1.84De	7	5	15.8	67	17
110 S	N. Y. State E. & G. ....	33	1.20	3.6	*1.89Ja	* 5	* 8	*17.5	63	19
299 S	Niagara Mohawk Power ..	44	1.80	4.1	*2.24De	* 8	—	*19.6	80	23
124 O	Northern Indiana P. S. ..	75	2.32	3.1	3.43De	10	4	21.9	70	28
183 S	Northern States Power ...	32	1.18	3.7	1.49De	1	5	21.5	79	12
12 O	Northwestern P. S. ....	27	1.10	4.1	1.61De	D3	6	16.8	68	12
151 S	Ohio Edison ....	38	1.48	3.9	2.12F	5	6	17.9	70	17
58 S	Oklahoma G. & E. ....	40	1.20	3.0	1.49F	4	6	26.8	80	11
31 S	Orange & Rockland Util. ..	48	1.10	2.3	*1.67De	* 7	*11	*28.7	66	14
20 O	Otter Tail Power ....	39	1.80	4.6	2.30De	D17	1	17.0	78	25
535 S	Pacific G. & E. ....	85	2.80	3.3	4.14De	12	5	20.6	68	42
58 O	Pacific P. & L. ....	47	1.80	3.8	*2.32N	*22	* 4	*20.3	78	23
142 S	Penn. P. & L. ....	30	1.25	4.2	1.70Ja	D3	3	17.6	74	13
273 S	Phila. Electric ....	61	2.40	3.9	2.84De	D2	4	21.5	81	28
40 O	Portland G. E. ....	42	1.32	3.1	2.13F	16	4	19.7	62	18

# FINANCIAL NEWS AND COMMENT

Approx. Rev. (Mill.)	(Continued)	3/21/61 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earnings	% Incr. in Share Earnings 5-yr. Recent	Price- Earnings Ratio	Div. Pay- out	Approx. Book Value	
89 S	Potomac Elec. Power ....	40	1.44	3.6	*1.96De	*10	* 6	*20.4	73	20
102 S	Pub. Serv. of Colo. ....	71	2.10n	3.0	2.95Se	15	6	24.1	71	27
394 S	Pub. Serv. E. & G. ....	52	2.00	3.8	*2.70De	*19	* 3	*19.2	74	28
92 S	Pub. Serv. of Ind. ....	58	2.20	3.8	2.58Ja	D6	2	22.5	85	28
34 O	Pub. Serv. of N. H. ....	23	1.04	4.5	1.39F	2	2	16.5	75	14
17 O	Pub. Serv. of N. M. ....	47	1.00	2.1	1.62Se	7	10	29.0	62	12
32 S	Puget Sound P. & L. ....	37	1.56	4.2	2.12De	—	9	17.5	74	23
72 S	Rochester G. & E. ....	48	1.80b	6.7b	*3.01De	*D7	* 7	*16.0	60	30
11 S	St. Joseph L. & P. ....	36	1.60	4.4	2.24De	5	8	16.1	71	19
81 S	San Diego G. & E. ....	38	1.20	3.2	1.85Ja	7	9	20.5	65	19
12 O	Savannah E. & P. ....	33	1.12	3.4	1.33De	6	4	24.8	84	13
14 O	Sierra Pacific Pr. ....	59	1.60	2.7	2.41Ja	D3	13	24.5	66	17
306 S	So. Calif. Edison ....	77	2.60k	3.4	*4.59De	*20	* 7	*16.8	57	44
56 S	So. Carolina E. & G. ....	52	1.50	2.9	2.02De	13	6	25.7	74	19
8 O	Southern Colo. Pr. ....	27	.90	3.3	1.17N	D1	—	23.1	77	13
297 S	Southern Co. ....	52	1.50	2.9	1.99F	3	8	26.1	75	17
22 S	So. Indiana G. & E. ....	43	1.70	4.0	2.65Ja	7	3	16.2	64	23
9 O	So. Nevada Power ....	38	.84m	2.2	1.48Ja	21	5	25.7	57	15
4 O	Southwestern E. S. ....	20	.76	3.8	1.02F	1	5	19.6	75	8
53 S	Southwestern P. S. ....	31	.88	2.8	1.14F	7	6	27.2	74	7
41 A	Tampa Electric ....	40	.72	1.8	1.24F	24	12	32.3	58	11
183 S	Texas Util. ....	22	.70	3.2	1.12De	—	—	19.6	63	10
49 S	Toledo Edison ....	96	2.08	2.2	3.12Ja	7	9	30.8	67	21
20 O	Tucson G. E. L. & P. ....	43	.80	1.9	1.19De	3	8	36.1	67	9
159 S	Union Electric ....	44	1.80	4.1	*2.17De	*19	* 5	*20.3	83	18
40 O	United Illuminating ....	32	1.38	4.3	*1.76De	* 4	* 2	*18.2	78	16
6 O	Upper Peninsula Pr. ....	33	1.60	4.8	2.16N	25	—	15.3	74	19
53 S	Utah Power & Light ....	35	1.32	3.8	1.83F	D1	4	19.1	72	20
161 S	Virginia E. & P. ....	57	1.30	2.3	1.88Ja	10	8	30.3	69	16
40 S	Wash. Water Pr. ....	52	2.00	3.8	*2.48F	*D4	* 3	*21.0	81	29
82 O	West Penn Power ....	71	3.00	4.2	3.61Se	4	3	19.7	83	26
13 O	Western Lt. & Tel. ....	60	2.40	4.0	3.54Ja	10	6	17.0	68	27
34 O	Western Mass. Cos. ....	26	1.20	4.6	1.61De	D3	1	16.1	75	19
141 S	Wisc. El. Pr. (Cons.) ....	45	1.80	4.0	2.71De	D6	7	16.6	67	29
48 O	Wisconsin P. & L. ....	38	1.48	3.9	2.38De	2	7	16.0	62	21
48 S	Wisconsin P. S. ....	33	1.30	4.0	2.05De	8	4	16.1	63	18
Averages .....				3.6%		6%	6%	20.9	70%	
Foreign Companies										
\$217 S	American & Foreign Pr. ..	11	\$ .50	4.5%	\$1.21De'59	1%	0%	9.1	41%	\$32
151 A	Brazilian Traction ....	4	.25	6.3	.58De'59	D10	—	6.9	43	28
97 A	British Col. Pr. ....	38	1.60	4.2	2.37De	D5	9	16.0	67	36
20 O	Calgary Power ....	28	.40	1.4	1.06Se	9	18	26.4	38	6
18 A	Gatineau Power ....	38	1.50	3.9	2.25De	13	—	16.9	67	21
17 A	Quebec Power ....	35	1.60	4.6	2.53De	8	9	13.8	63	27
93 A	Shawinigan Water & Power	29	.68	2.3	1.58De	6	6	18.4	43	19

\*Deferred taxes resulting from liberalized depreciation are not normalized. If they had been normalized the price-earnings ratio would be higher, and the rate of increase in share earnings would be smaller. D—Decrease, NC—Not comparable, A—American Stock Exchange, O—Over-counter or out-of-town exchange, S—New York Stock Exchange, Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December, b—Also 3 per cent stock dividend (paid January 25, 1961) included in the yield; similar dividends are paid annually, representing balance of earnings, c—Also 2½ per cent stock dividend January 10, 1961, d—Also 2 per cent stock dividend May 1, 1961, e—Also regular annual 3.3 per cent stock dividend (3 per cent in previous years), included in the yield, f—Also regular stock dividend of one-half per cent quarterly, included in yield (paid since 1956), h—Also 2.4 per cent stock dividend December 1, 1960, included in yield; stock dividends are paid annually, reflecting balance of earnings, j—The rate of increase would be 12 per cent if the present number of shares had been used to compute share earnings of past years, instead of using the number of shares actually outstanding at the end of each year, k—Also 4 per cent stock dividend February 24, 1961, n—Also 5 per cent stock dividend February 17, 1961, m—Fifty per cent stock dividend payable January 18, 1961—cash dividend on new stock 84 cents.



## What Others Think

### Congressional Studies on AEC Regulation

**S**TUDIES by the staff of the congressional Joint Committee on Atomic Energy, the Atomic Energy Commission, and the University of Michigan Atomic Energy Research Project have just recently been released. Issued in two volumes, entitled "Improving the AEC Regulatory Processes," the studies all deal with regulatory procedures and organization of the commission. This staff study is not a congressional committee report and the views set forth, therefore, should not be construed as being representative of the Joint Committee.

In releasing the committee study, the chairman of the Joint Senate-House group, Representative Holifield (Democrat, California), stated:

I hope that these studies will be carefully evaluated by all who are interested in this important area of inquiry in order that we may have the best thinking of industry, labor, and government officials in finding a solution to our regulatory problems. The Joint Committee expects to hold hearings concerning the AEC's regulatory organization and procedures in late April, at which time these studies and other proposals for revision of the AEC regulatory organization will be explored.

The study was prepared by James T. Ramey, executive director of the Joint Committee, David R. Toll, staff counsel, with Professor David F. Cavers of the Harvard Law School and William Mitchell of the Washington, D. C., bar (former AEC general counsel), who served as consultants to the committee.

A major revision of the regulatory organization is recommended and it is concluded that an existing regulatory process has given rise to problems which have not been, and apparently cannot be, resolved by the present organization. The study further proposes that an atomic safety and licensing board should be created within the commission to handle the unique problems of atomic licensing. This group would be appointed by the President.

**I**N an appendix to the study, the AEC report itself is printed. The first part of this report contains background material on regulatory organization and procedure. The second part is devoted to improvements, the most significant being the establishment of an office of director of regulation. The director would report directly to the commission on regulatory matters and, because of immediate needs, this change in the setup has already been implemented. However, this has been with

## WHAT OTHERS THINK

the understanding that this action will not preclude other proposals for revision of the AEC.

The appendix also reproduces a study conducted by the Atomic Energy Research Project of the University of Michigan Law School. In essence, this work recommends a separate agency which would exercise the AEC's regulatory functions.

**T**HE recommendations of the Joint Committee staff itself occupy ground somewhere between AEC's minor changes and the University of Michigan's more extensive suggestions. As already stated, the Joint Committee recommends the establishment, through legislation, of an atomic safety and licensing board. The

three-man board would consist of two members technically qualified, while the third would be "skilled in the conduct of administrative proceedings." The board, as envisioned by the Joint staff proposal, would exercise final licensing authority, as well as recommend regulatory standards and rules.

The authors of the staff study believe that the board concept would remove present difficulties, inherent in the merger of adjudicatory and promotional responsibilities, and finally increase public confidence in regulatory needs.

IMPROVING THE AEC REGULATORY PROCESS, Volumes 1 and 2. Joint Committee on Atomic Energy, Congress of the United States, pp. 672. Available from the Superintendent of Documents, Washington 25, D. C. Price \$3.05 for the two volumes.

## Interior Backs Burns Creek Project

**S**ECRETARY of the Interior Stewart L. Udall has recommended that Congress authorize the reregulating reservoir and hydroelectric power plant at the Burns Creek site on the upper Snake river near Idaho Falls, Idaho. The favorable report was filed on three similar bills (S 66, HR 36, and HR 378). In a letter to Senator Anderson (Democrat, New Mexico), chairman of the Senate Interior Committee, Secretary Udall stated:

The Burns Creek dam, reservoir, and power plant would be located on the Snake river in Bonneville county, Idaho, about 30 miles downstream from Palisades dam. It would be integrated electrically, hydraulically, and financially with the existing Palisades reclamation project. Our planning report on this development, together with copies of the comments we have received from state and federal agencies, has been transmitted to the president of the Senate and referred to your committee.

The prime purpose of the Burns Creek development is reregulation of releases from Palisades. In addition, 100,000 acre-feet of its 234,000 acre-feet of reservoir capacity will be available for long-term holdover irrigation storage purposes and a 90,000-kilowatt power plant is proposed. The reregulation of Palisades releases will result in more efficient use of Palisades than is possible otherwise. Without downstream regulation, for instance, the operation of Palisades power plant would be limited by restrictions on stream flow fluctuations below the dam.

**S**ECRETARY Udall stated that the total estimates of conducting the development, and this is exclusive of fish and wild life, would be \$45,430,000 on the basis of 1959 prices. He said that estimates indicate that costs allocated to commercial power could be repaid with interest within a 50-year period. The principal physical works of the project include



## PUBLIC UTILITIES FORTNIGHTLY

a 176-foot rolled-earth dam, and a 234,000 acre-foot reservoir for the power plant. Secretary Udall indicated that economic analysis of the development disclosed that benefits would exceed costs at a ratio of 1.65 to 1.

He further stated that the Bureau of the Budget has advised that there is no objection to the presentation of these recommendations from the standpoint of the administration's program.

—C.M.B.

### Utility Leadership Called to Political Action

**T**HE public utilities of this country are faced with the greatest threat to their survival as privately managed enterprises and at the same time offered the greatest opportunity to preserve the private capital system since Socialism began its insidious penetration.

By their very nature, the major factors in the utility industry are in close touch with almost the entire population of the nation. The local managers are active in the civic affairs of every community, and the heads of the individual companies are, for the most part, noncompetitive with each other.

Utility managements have generally understood the term "noblesse oblige" and tried to live by it in their own service areas. Unfortunately, only a handful of their counterparts in industry have followed this example, mostly because of preoccupation with production, sales, and profits.

If the leaders of the industry would gather together with a determination not to disband until they had evolved a practical means of mobilizing brains, money, and man power, then the private capital economic system and its political partner, representative constitutional government, can be revitalized. Organized determination to win is a proven factor in national affairs. Kennedy did it.

**P**RESUMING such a meeting were to take place, two slogans should be immediately adopted—"check your partisan

politics outside" and "a little knowledge is a dangerous thing."

In order to avoid the usual pattern of rousing speeches and cheering followed by dashing away on urgent business, the gathering should select three or five top echelon executives to devote their entire time to evolving a program of action which can be channeled down through the company networks and permeate every community in the country.

Company activities in public affairs and individual activity in politics on a broad and intensive scale can do the job. There will be loud protests from socialistic sources in direct proportion to the effectiveness of the work, but the alternative is capitulation.

Business-oriented politicians would welcome this effort in support of their convictions and others who have been subjected to left-wing pressures could be freed from the practical need of supporting socialistic measures merely to stay in office.

**T**HE utility industry is in a singularly appropriate position to spark a rebirth of business-oriented thinking in national affairs. It has a minimum of government-controlled business to gain or lose, it has relatively stable employee relations, and it is not subject to drastic economic cycles. The very nature of "public service companies" requires that the public affairs function of management be given top priority.

## WHAT OTHERS THINK

An appropriate agenda to put this concept into being would involve the following:

1. Evaluation of the available brains, money, and man power.
2. Determination of desirable and attainable objectives.
3. Planning constructive procedures and elimination of areas of internal conflict.
4. Selection of advisory and operational components to achieve national co-ordination of business-oriented forces.
5. Preparation of overall strategy.

The characteristics of the individualistic American business leader are such that a regimented organization, such as a labor union, is neither possible nor desirable.

The strength of this proposal is based on dedicated co-operation rather than coercion. However, an American "party line" could well be drawn from the remarks of Herbert Hoover: "... there is an American kind of nationalism, which is neither isolationism nor aggression and imbedded deep within it is compassion for distress both at home and overseas."

—FLOYD L. CARLISLE

## Electric Generation Superstitions

ON March 10th, the *Los Angeles Times* carried a thoughtful editorial statement, entitled "The Water Power Superstition." This particular editorial sets forth some facts which are little recognized by the general public regarding electric generation. This incisive editorial is reprinted here in full:

### The Myth of the Dam

"THE myth about the electric power dam will not die. Most people do not analyze their superstition about dams, and as a result the public power advocates in the government (and the Interior Department is loaded with them again as it was in the days of Harold Ickes) are able to keep lively the notion that if all the water power sources were developed, with public money, of course, the country could sit back and enjoy electricity practically for free.

"President Kennedy in his message about natural resources put new life into the myth, and his appointments to the Interior Department indicate that he intends to keep the old idol worship going. The power dam is still the thing, even

though the Tennessee Valley Authority has proved that dams only develop a hunger for electric power which they cannot satisfy. The TVA, set up to develop power from the Tennessee river and its subsidiaries, is now, we believe, producing almost as much power from steam as it is from falling water. And the steam plants as well as the hydroelectric plants are being paid for by the general taxpayers to support the delusion that the Tennessee valley and its adjacent country are flourishing by virtue of falling water.

### Private Investment

"THESE thoughts were inspired by an advertisement of the Utah Power and Light Company appearing about six weeks ago in the *Salt Lake Tribune*. The ad boasted that this company and others were investing \$1.1 billion in the future of the Rocky Mountain area. This investment will be in steam generation of electric power.

"'By 1980,' says the advertisement, 'major utilities of the Rocky Mountain area plan to have available 22 million kilowatts of electricity, 5½ times present

PUBLIC UTILITIES FORTNIGHTLY



"I'M NOT REALLY A JOCKEY, ACTUALLY I'M AN UNDERGROUND CABLE SPLICER!"

demands. To do this, these companies will add approximately 18 million kilowatts of generating capacity.'

"And then the advertisement makes this devastating point: 'The electricity to be provided from the Colorado river storage project is only 1.2 million kilowatts, just 6½ per cent of our needs in 1980.'

"THE storage project was sold to the people of the area—and to the Congress—by the public power advocates in the federal government as a virtually

unlimited supply of electricity, plus water for short season agriculture on the high plateau. And now it can be foreseen, even before the project, paid for by all the taxpayers of the country, has been completed, that it will be just a drop in the Rocky Mountain electric power bucket. The federal government taxes everybody for an expensive project, with dubious arrangements for repayment, which in the end will have scarcely any economic importance to the growing Rocky Mountain community.

## WHAT OTHERS THINK

### A Local Example

**W**E have seen this development of power use in Los Angeles, not as a projection into the future, but as a reality of the past and present. Hoover dam was expected when it was completed to keep southern California in power perhaps forever. (In the case of this dam the power users are paying for it, which makes it different from other federal projects.) In 1943, the peak year, Hoover dam supplied the city of Los Angeles with 97.2 per cent of its electric power; the percentage had been growing since the first year, 1937, when it was 41.8 per cent. But since the war the Hoover dam portion of the power supply has been going down. The demands for power in Los Angeles exceeded all the estimates, and last year the great dam supplied only 7.5 per cent of the electricity used in the city. Most of the rest comes from the steam plants built and operated by the Department of Water and Power.

### Alternative Stated

**T**HE use of electric power usually begets the use of more power—and only so much water falls over a dam. The promises of the Interior Department are false. Either the growing community must produce its own power, as Los An-

geles has done, and as all southern California has done through the private utility companies, or the federal government will step in and build supporting steam plants and charge them to the whole country.

“‘Development of national resources,’ which usually means building dams for power and to irrigate unnecessary farm land, is a slogan that should make the people wary. It does not mean what the public power advocates say.”

**I**t is not often that a single short article can sum up all of the inherent dangers, fallacies, and misconceptions regarding public power. Too often, the public is led to believe that development of new hydroelectric sites can go on forever, forgetting that there are just so many rivers to develop.

Public power advocates have leveled the charge that America is falling behind the Soviet Union in hydroelectric power-generating capacity, completely forgetting that the majority of our streams are now developed and that in Russia they are not. Then, too, the public power advocates seem to ignore the fact, as this editorial points out, that vast amounts of power produced at hydroelectric sites are manufactured through steam generation.

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## Do Issues Affect Elections?

**T**HE past presidential election seems to have covered many issues that might influence the voting public. These range from the state of our economy to foreign policy, and even the question of religion. Recently a survey was conducted by Central Survey, Inc., of Shenandoah, Iowa, the results of which were published under the title “The Rural Electrification Issue.”

The poll was taken in rural areas of

Indiana in January of this year. Interviews were conducted face to face on a random basis. Some 700 persons were contacted who were farm owners or operators with at least six months' residence. Central Survey spokesmen have stated that every effort was made to preserve an unbiased atmosphere during the interviews.

The survey indicates that even among co-op members the subject of rural elec-

## PUBLIC UTILITIES FORTNIGHTLY

trification was a very minor issue in the November elections. Only 1 per cent of those interviewed indicated that it was an important issue to them personally. Only one of every five persons contacted had any opinion as to which congressional candidate took the best stand on this subject.

**T**HE survey tends to show that on several points of information, co-ops members either have no opinion or incorrect information. For example, the survey states that a majority do not realize that co-ops receive their wholesale power supply from investor-owned power companies.

Neither do they realize that co-ops are taxed on a different basis than investor-owned power companies. Also, a majority interviewed did not realize that co-ops are able to borrow money from the federal government at a 2 per cent interest rate. The survey states that when queried on these points, a majority of the co-op members replied that they felt co-ops should pay the same taxes as the investor-owned companies. A majority

also indicated that interest rates should correspond with the actual cost of money to the federal government. The survey also shows a lack of familiarity with the National Rural Electric Co-operative Association and with the association's position on government ownership of electric power.

**I**N the past the fallibility of surveys and public opinion polls has been admirably demonstrated. A survey must always be looked at as an indication of a particular condition rather than a statement that thus and so is actually the case. Certainly too much emphasis is given to just how much this or that particular association can depend upon the support of its membership. All too often, the heads of a particular group assume that their familiarity and position on a given subject reaches down to the membership—and very often this is just not so. This survey, assuming that it presents an accurate indication of existing attitudes, illustrates this point.

THE RURAL ELECTRIFICATION ISSUE, Central Surveys, Inc. Shenandoah, Iowa, pp. 19.

## INGAA Urges Consumer Interest in Energy Studies

**A**NY studies of energy resources undertaken by either the executive or legislative branch of the federal government should be fair and impartial, thereby protecting the American consumer in his right to choose between available fuels at competitive prices, according to W. E. Mueller, president of the Independent Natural Gas Association of America. This was the gist of a letter to President Kennedy offering the fullest co-operation and participation of that association in an "objective" study of that nature.

The letter asserted that INGAA is dedicated to the principle that consumers

and the nation will be best served so long as all fuel requirements continue to be supplied on a competitive basis. Mr. Mueller expressed the association's belief that any policy tending to weaken the forces of competition is basically unsound. Of immediate concern to the natural gas industry is the possibility that any such policy could adversely affect millions of household gas consumers because of increased rates resulting from competitive restrictions, he stated.

**M**R. MUELLER noted that the natural gas industry is the fifth largest in



## WHAT OTHERS THINK

the country and that the INGAA membership includes natural gas transmission, producing, and distribution companies. He referred to the impetus that will be given the nation's economy through planned expansions and stated:

Surveys indicate that the natural gas industry plans continued expansion on the order of that made in recent years, which has approached \$2 billion per year. Plans are being made for procurement of investment funds and for steel and other materials. Employment

will be increased in many states if our industry's products are given an equal opportunity to serve household and industrial markets under fair regulatory policies and without artificial handicaps.

In view of the bills now before Congress which would establish a national fuels policy, and a presidential study, attempting to evaluate if such a policy would be prudent, Mr. Mueller's letter to President Kennedy takes on added significance.

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## Notes on Recent Publications

**EEI COMPLETES EXPANDED FARM ELECTRIC SALES BOOK.** A newly revised and expanded edition of the *Farm Electric Sales Handbook* has recently been published by the farm group of the Edison Electric Institute. The handbook is intended for use as a handy reference by farm electric salesmen of electric utility companies and electric equipment manufacturers, and by agricultural extension services of colleges. It is designed to give general information that will enable the salesman to discuss an electric application with a farm customer and give the farmer an idea of what is involved in a particular job and its approximate cost.

Some of the subjects covered are irrigation, electric equipment for farm shop, dairy, electric brooding, etc. In this new edition of the handbook, chapters have been added covering electric motors, electric welding, emergency lighting, and water warming for livestock.

Also included are numerous tables containing statistics on such things as approximate equipment costs, motor sizes and prices, wire selection, diagnosis of motor troubles, kilowatt-hour use estimates, silo capacities, breeding and gestation, etc. Owners of the previous edition need only order the new edition and insert it in the binders they already have.

FARM ELECTRIC SALES HANDBOOK is obtainable by writing to sales division,

Edison Electric Institute, 750 Third avenue, New York 17, New York, pp. 114. Prices are as follows: For the text only, \$2.25 to EEI members; \$2.75 to nonmembers. For the binder only \$1.25 to members; \$1.50, nonmembers. For the complete handbook, including binder and text, the price to members is \$3.50, nonmembers, \$4.25.

**NUCLEAR REACTORS.** As more and more atomic energy reactor projects are undertaken, it becomes increasingly difficult to keep track of the status of the various projects. The Atomic Energy Commission has recently published a booklet, entitled "Nuclear Reactors Built, Building, or Planned in the United States as of December 31, 1960," which should do much to update information on this subject.

The booklet contains tables listing civilian reactors, military reactors, reactors for export, etc. Semiannually the AEC publishes this booklet, which enables those interested to keep a running account of activities in the nuclear reactor field.

NUCLEAR REACTORS BUILT, BUILDING, OR PLANNED IN THE UNITED STATES AS OF DECEMBER 31, 1960. (TID-8200, 3rd Rev.) pp. 26. Available without charge from the Office of Technical Information Extension, U. S. Atomic Energy Commission, P. O. Box 62, Oak Ridge, Tennessee.

## PUBLIC UTILITIES FORTNIGHTLY

**TYPES AND FUNCTIONS OF BOILERS.** Although there are any number of technical manuals, catalogues, and other publications available on the boiler industry, there is a notable lack of basic source information in this area. This has been remedied by the recent publication of a one-volume reference work, entitled "*Boilers: Types, Characteristics, and Functions*," which should hold great interest for anyone involved with heating and power-generating equipment.

All practical aspects of the subject are covered in the book's 32 chapters. For convenience these chapters have been organized into the following general headings: boiler classification, boiler design, steam-generating equipment, boiler construction, industry regulation, and industry status. The author defines basic industry terms that are often misunderstood and misapplied and then proceeds to explain the general classes of boilers. In this particular section the entire spectrum of boiler design is given detailed attention.

The section devoted to steam-generating equipment is quite comprehensive and ranges from packaged boilers to nuclear reactors. Examination is also made of present industry developments and projected trends for the future. The publication avoids generalizations and yet does not become involved in theory and mathematics which are better left to the numerous detailed and specialized publications.

The author of this work is Carl D. Shields, a registered professional engineer. Mr. Shields is a graduate of Purdue and has worked for such well-known companies as the United States Rubber Company and Chrysler's Airtemp Division. In 1948 he started his own consulting practice. His experience in designing and supervision of more than 250 projects, encompassing steam power, heating, and other mechanical services, has equipped

him to make a fair presentation in this encyclopedia-like publication.

More than 500 photographs and detail drawings are included in the volume and these give a clear comprehension of equipment to readers who are inexperienced in this field.

There are also numerous tables and charts which provide information on design, construction, and rating data.

This reference book should be of great interest and help to anyone concerned with designing, manufacturing, buying, specifying, selling, installing, or operating any type of boilers.

**BOILERS: TYPES, CHARACTERISTICS, AND FUNCTIONS**, by Carl D. Shields. F. W. Dodge Corporation, 119 West 40th street, New York 18, New York. Photographs and illustrations. Index, pp. 559. Price, \$15.

**GENERATING ELECTRICITY WITH PLUTONIUM REACTOR.** The Joint Committee on Atomic Energy has recently released a technical and economic study of generating electric energy with the new plutonium production reactor, now under construction at Hanford, Washington. The report contains the latest estimates on the cost of generating electricity with the new production reactor. The studies indicate that the most economic reactor would have a capacity of 650,000 kilowatts when operating as a dual-purpose reactor for the production of plutonium and by-product power, and 760,000 kilowatts when operated for power purposes only. Such a plant would cost some \$96 million. This report contains all of the unclassified studies which are now available.

**POWER CONVERSION STUDIES, HANFORD NEW PRODUCTION REACTOR.** Available from the Joint Committee on Atomic Energy, Room F-88, U. S. Capitol, Washington 25, D. C., pp. 375.

# The March of Events



## Snake River License

THE FPC was asked by Interior Secretary Udall to delay indefinitely on granting any new hydro licenses on the Snake river. In a letter to FPC Chairman Kuykendall, Udall referred to rival applications by private electric companies for the High Mountain Sheep site and by a Washington co-operative group for the Nez Perce site. Udall said the Interior Department is intensively studying fish problems on the Columbia-Snake rivers and expects an answer by the end of 1964. The FPC, of course, is going ahead with field hearings, which started March 20th in Portland, Oregon. These hearings were expected to require three weeks.

## Interior Policy Outlined

ASSISTANT Interior Secretary Holum broadly sketched the administra-

tion's power policies in an address before the National Farmers Union on March 15th.

He pledged that the administration will help "preference customers" to meet future power supply needs "to the best of our ability."

It was also noted that 450 co-operative systems are now dependent more or less on federal power supply. Holum said Interior will co-ordinate its efforts with respect to preference customers through project development, transmission line planning, national co-operative pooling of power, and "exciting new concepts," particularly mentioning the process of pumped storage. The U. S. Army Engineers recently issued a directive to its field engineers on the subject of pumped storage.

## Connecticut

### Gas Refunds Announced

FOLLOWING a meeting with the state public utilities commission, Raymond A. Gibson, president of the Hartford Electric Light Company, announced that the utility's gas customers will receive a "modest refund" in the near future.

The state public utilities commission recently ordered that a similar refund be given by the Bridgeport Gas Company.

Both companies are supplied with natural gas by the Tennessee Gas Transmission Company. Under an order from the Federal Power Commission, the Tennes-

## PUBLIC UTILITIES FORTNIGHTLY

see utility recently refunded money to companies which receive its gas.

Gibson said Hartford Electric had not yet determined how much of its refund would be passed on to its 32,000 gas customers in the New London, Stamford,

and Torrington areas. He said the company received about \$48,000 from Tennessee Gas but only a small part of this refund applies to the period since September 1st when higher rates became effective.

### Maine

#### Phone Hog Law Signed

**G**OVERNOR Reed has signed into state law a bill to make it a crime to refuse to yield a telephone party line for an emergency call. The act also will make it unlawful to demand the use of a party line on the pretext of an emergency.

An emergency is defined as a situation in which life or property is in danger and the prompt summoning of aid is essential.

The penalty for violation will be a fine up to \$300, jail up to one month, or both.

### Michigan

#### Gas Storage Law Sought

**A** BILL which would make it easier for corporations to condemn property for underground gas storage was supported by industry spokesmen at a hearing conducted by the state senate's judiciary committee. It was opposed by representatives of farmers from the Howell and Allegan area.

Under existing Michigan law, gas companies must acquire rights by negotiation for 90 per cent of property in a gas field area before they may resort to

condemnation proceedings for the remaining 10 per cent.

The proposed legislation was introduced in the legislature at the request of Consumers Power Company. It would require the companies to negotiate for only 75 per cent of the property rights before starting condemnation proceedings.

William Palmer, executive secretary of the Michigan Oil and Gas Association, said the bill was a "step in the right direction," since it would aid industrial expansion.

### Nebraska

#### Bill to Legalize Charitable Contributions Killed

**T**HE state legislature's commerce and insurance committee has killed a bill which sought to legalize charitable contributions by public power districts and other such utility-type public corporations.

Listed as LB 320, the rejected measure would have authorized public corporations engaged in a proprietary business such as furnishing light, power, gas, or water to contribute up to one-half per cent of annual gross receipts to charitable enterprises other than those related to religion or private education.

## THE MARCH OF EVENTS

### New Mexico

#### Regulatory Change Given Approval

**T**HE state legislature has given final approval to a measure which would submit to the electorate a proposed state constitutional amendment to merge the public service commission and the state corporation commission. The proposal would set up a new five-member corporation commission appointed by the governor. It would regulate all public utilities and common carriers. A similar proposal was rejected by voters in 1955.

Under present New Mexico law and constitutional provisions, the public service commission regulates electric, water, and gas utilities, while the corporation commission regulates rail, motor transport, telephone, and pipeline companies, and has other functions.

Members of the present public service commission are appointed by the governor.

Members of the state corporation commission are now elected for six-year terms.

### North Carolina

#### Longer Commission Terms Asked

**A** BILL that would lengthen the terms of members of the state public utilities commission was introduced in the state legislature recently by Representative Irwin Belk of Mecklenburg, who said it was intended to "help take the agency out of politics."

Belk, who heads the house public utilities committee, said he also was considering a measure calling for the creation

of a commission to study "ways of improving" the entire utility regulatory structure in North Carolina.

Under the bill already introduced by Belk, all future commission appointments would be made for periods of eight years, instead of the present six. He said he believed "longer terms would help take the job out of politics." Many states have found that longer terms relieved the commission members of political pressure, Belk stated.

### Ohio

#### Rate Raise Approved

**T**OLEDO EDISON COMPANY and city officials have announced an agreement on an 8.3 per cent electric rate increase for 102,000 Toledo homes and businesses. The city's public utility consultant, William Wasick of Akron, said the new rate would increase the utility's annual income by \$992,000. Toledo Edison had asked for a 14.9 per cent increase, amounting to \$1.8 million.

The rate agreement was contained in

an ordinance submitted to the city council last month. The ordinance would be for ten years, with provision for renegotiation of rates in three years.

Omitted from the agreement was a proposal by the utility for a fuel escalator clause which would tie residential rates to the price of coal. The escalator clause was included for commercial customers.

If the city council accepts the settlement, company officials said it would set a pattern for other increases.



## Pennsylvania

### Gas Refunds Approved

**T**HE state public utility commission has approved refunds of \$2.6 million and rate reductions of about \$400,000 a year by Manufacturers Light & Heat Company and Equitable Gas Company, both of Pittsburgh.

The two utilities serve 493,500 natural gas customers in 23 Pennsylvania counties. The rate cuts and refunds followed agreements by Texas Eastern Transmission Corporation and Transcontinental Gas Pipe Line Corporation to reduce wholesale charges to both companies and to other distributing utilities.

As approved by the commission, Manufacturers is to refund about \$1.3 million

on the basis of actual use over the next twelve months and to lower rates about \$300,000 annually for 255,000 customers. Manufacturers will drop its cost-of-gas surcharge covering purchases from Texas Eastern and Transcontinental from 1.02 cents to 0.65 cents per thousand cubic feet on all gas sold retail except that included in minimum bills.

Equitable was to refund some \$1.3 million during a 30-day period, but would make per capita lump sum payments to 238,500 customers for all gas used during the time the higher rates were in effect. Equitable customers will get a rate reduction of one mill per thousand cubic feet, amounting to \$79,300 per year.

## Rhode Island

### Asks Change in Phone Line Tax

**A** BILL to end the exemption of the New England Telephone & Telegraph Company from local taxation of its lines and equipment in the state was introduced in the legislature by State Senator Thomas H. Levesque of Portsmouth.

He said he thought cities and towns should be allowed to tax such things as telephones and telephone lines, as well as other telephone equipment.

Opposition to the proposal was expressed by a spokesman for the telephone company who noted that the utility al-

ready is paying a gross receipts tax to the state in lieu of local taxation. He said the payment for the current fiscal year came to \$3,228,211.84.

Levesque's bill would repeal a section of Rhode Island law which reads:

The lines, cables, conduits, ducts, pipes, machines and machinery, equipment, and other tangible personal property within this state of telegraph, cable, and telephone corporations, used exclusively in the carrying on of the business of any such utility shall be exempt from local taxation.

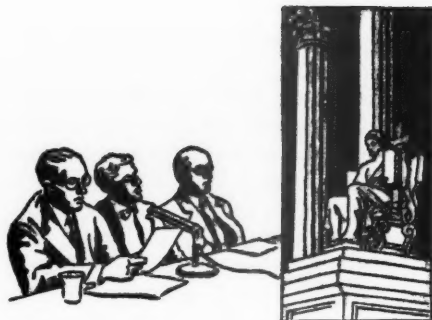
The section does not apply to real estate taxation.

## Tennessee

### Relocation Bill Sent To Governor

**A** BILL given final passage by the state legislature and sent to the governor for signature provides that when facil-

ities of city-owned utilities must be moved to make way for construction of federal-aid highway projects, the federal government will pay 90 per cent of the cost.



# Progress of Regulation

## *Trends and Topics*

### Public Utility Status of Real Estate Company Supplying Water

COMPANIES developing real estate subdivisions often install water systems and supply water to purchasers of lots. The question has arisen whether such a company operates as a public utility. In some cases they have been held subject to regulation, while in other cases they have been held to be beyond the scope of commission regulation. Pertinent factors involved in deciding the question of public utility status have been mentioned in several cases. There is the question whether the company offers to serve everyone in the area or only purchasers of lots. There is the question of declaration of intention to dedicate facilities to general public use. The question of the use of a public highway as a factor has also been considered. Land development companies exempted from regulation have usually supplied service only to purchasers of lots, under an agreement specifically providing for service as a part of the deal with the lot owner.

#### *Views Expressed by Connecticut Commission*

A recent decision by the Connecticut commission involves operations by a realty company in the towns of Monroe and Westport, Connecticut. Following complaints, the commission had investigated small water systems, and it concluded that a realty company operating a water system is a public utility when it holds itself out, by its acts, to serve the public generally, notwithstanding contract disavowal of any intention to dedicate its facilities to public use and a corporate structure under which it is prohibited by statute from acting as a public service water company. The commission said that the test of public utility status is whether there is a holding out to serve the public generally, and whether a company is a public utility does not depend solely upon the wishes and declarations of the owner (37 PUR3d 108).

The same commission had previously held that a real estate corporation holding itself out to supply water at uniform rates to all purchasers of lots

## PUBLIC UTILITIES FORTNIGHTLY

within its development and using public highways was a public utility (85 PUR NS 392).

On the other hand, the commission decided in an earlier case that water service furnished by the owner of a tract of land to cottage owners who had purchased lots from him was not a public utility where service was limited to the particular development with the understanding that cottage owners would at some time in the future reimburse the tract owner for the cost of the water supply and operate it for their own mutual benefit. No public highways were used in distribution (58 PUR NS 60). The commission had also ruled that a water system owned and operated by a residential development company was not a public utility where the company did not hold itself out as willing to serve all members of the public but served only a restrictive group, property owners in a specified tract of land, and where the company retained the right of selection of customers (19 PUR3d 283).

### *Distinction Explained in California*

The California commission, in several cases, held that a land development company operating a water system was a public utility; but the California supreme court, in 1919, held that a company selling water rights to owners of land for use thereon and appurtenant thereto was not shown to be a public service corporation subject to regulation. The court said that the fact that persons holding separate water rights, each upon his own land, are numerous does not convert their several private uses into a public use (PUR1919A 398).

Subsequently in California decisions the commission recognized the distinction made by the supreme court between companies supplying water as a condition to the sale of land and companies selling water generally to people in a subdivision. The commission, for example, in one case held that a realty company, not incorporated to conduct a general water business but supplying water only to owners of lots within its subdivided properties upon a contractual basis contained for the most part in the deeds, and which had avoided the dedication of its water supply to the public generally, was not a public utility subject to commission jurisdiction (PUR1927E 596).

On the other hand, a real estate company which, incidental to its regular business, conducted a small water distribution system was held to be a public utility (PUR1922A 181). Likewise, a water system in a real estate subdivision was held to be dedicated to public use when the contracts for the sale of lots stated that a water system was to be installed and reserved rights of way, easements, and rights of ingress and egress for a system. This was followed by the actual sale of water to lot owners (PUR1926D 37).

The California commission held that a water system owned by the subdivider of a real estate development who expended money for operation and repairs and collected charges for service was a public utility notwithstanding his effort to have consumers join a mutual association to operate the system at noncompensatory rates (70 PUR NS 335).

The commission also ruled that the owner of a real estate subdivision who distributes and sells water for compensation thereby dedicates the water sup-

## PROGRESS OF REGULATION

ply and facilities to public use, regardless of whether or not certain consumers in the tract have signed agreements that this is surplus water and that no liability rests upon the suppliers to serve, if in fact the water is not surplus within the statutory exemption of the sale of surplus water from a well used primarily for domestic purposes by the owner or for irrigation of the owner's land (77 PUR NS 24). A privately owned water system supplying water to all residing or owning lots within a certain subdivision was found to be a public utility where the individual owner always retained full ownership and never conveyed any legal right to any association of lot owners (77 PUR NS 436).

### *Rulings in Other States*

The Arizona commission has held that land companies solely in control of the production, distribution, sale, and management of water supplied to land-owners are public utilities, subject to regulation (PUR1919E 350). A water company primarily established as a part of a real estate development project was held to be a public utility charged with the service obligations of such a corporation (PUR1933C 137).

The Missouri commission held that a water system constructed in a residential real estate subdivision by its owner, not dedicated to public use but to secure service for the exclusive and private use of the residents, and to be operated at cost and not for hire, was not a public utility (22 PUR NS 349). On the other hand, a water system constructed in a residential real estate subdivision by the owners was held by the same commission to be a public utility where the owners did not permit all parties to participate in the management of the system equally and share alike in the benefits and burdens incurred in securing service, as they would in the case of a mutual organization, and where the owners professed to serve the area to the exclusion of other water systems (25 PUR NS 110).

Owners of a well and water pumping facilities, who had voluntarily established a water system and rendered service for gain in a real estate subdivision after having held themselves out to do so, according to the Missouri commission, had placed themselves under the jurisdiction of the commission (80 PUR NS 274). On the other hand, owners of a real estate subdivision, supplying water to purchasers of lots under contract and only as an accommodation, were held by the same commission not to constitute a public utility subject to commission jurisdiction where the tract owners, obtaining the water from a supply developed for themselves, had not held themselves out to furnish utility service and there had been no dedication to utility service (85 PUR NS 156).

An original owner of a residential development who installed a small water system to serve himself and other residents of the development for a specified charge, and who thereafter supplied service to residents in other areas, was held by the Missouri commission to be operating as a public utility (23 PUR3d 110).

The New Jersey commission held that a land development company which

## PUBLIC UTILITIES FORTNIGHTLY

owned and operated a water main actually being used for public use under a privilege granted by a county was a public utility with respect to the operation of the water main and system (24 PUR3d 55).

The New York commission held that a building corporation operating a water system for the occupants of homes which it had constructed in a large housing project was a public utility, despite the fact that the corporation had installed and operated the system pursuant to a contract providing for its eventual transfer to a water district (96 PUR NS 140).

A land company which supplied water to those persons on its tract of land who purchased a meter and connected with its water main was held by the Pennsylvania commission to be a public utility subject to regulation, notwithstanding its charter obligations as a land company and the fact that in supplying water to the public it might be engaged in an ultra vires act (PUR1922D 120).

A real estate development company building a water system and holding itself out to serve at a specified rate anyone living on the development was held by the Wisconsin commission to be a public utility subject to regulation (PUR1927B 382). On the other hand, the owner of a real estate subdivision constructing and operating a small water plant on his own property for service only to purchasers of his own houses, and not holding himself out nor desiring to serve the public generally, was held not to be a public utility (PUR1929A 183). The Wisconsin commission held that a water system owned and operated by a subdivider of real estate was a public utility where he billed the lot owners for the expense of operation, notwithstanding his efforts to have the consumers join a co-operative association to operate the system (96 PUR NS 120).

### *Federal Court Decisions*

The U. S. Supreme Court, in 1917, held that a water system operated for the purpose of supplying water to residents and inhabitants of a part of a town site was a public utility so as to be subject to regulation by a state commission, although the plant was owned by an individual who pumped water on her own land, stored it in tanks on her own land, and thence conducted it through pipes, all upon her own land, and delivered it to consumers at the boundary line between her and their properties. They had purchased their lots with the oral understanding that water could be secured from such a system (244 US 39).

The facts in this case were distinguished by a federal court in a case involving the question of the jurisdiction of the Oregon commission over water rates of a company engaged in selling lands owned by it and as an incident of the sale furnishing water for irrigation and domestic use to the purchasers, and to no others, at a fixed contract rate. The court held that this company was not subject to regulation as a public utility. It noted that in the Supreme Court case the court said there was nothing in the record to indicate that the company was engaged in furnishing water only to the particular individuals, but rather to all residents within a given area (PUR1918C 274).



## *Review of Current Cases*

### Incentive to Seek New Reserves Recognized in Gas Producers' Cost of Service

THE Federal Power Commission has approved a rate increase from 22½ cents to 26 cents per Mcf filed in 1955 by two natural gas producers, United Carbon Company and Columbian Fuel Corporation, pursuant to an agreement with their customer, United Fuel Gas Company. The increase was put into effect by the two companies in early 1956 subject to refund. The commission found that the increase was supported by substantial cost-of-service evidence and, consequently, allowed the 26-cent rate to remain in effect. All liability on the refund obligation was discharged.

The hearings and the examiner's decision in this case were completed before the issuance of the commission's Phillips opinion (35 PUR3d 199) and Statement of General Policy No. 61-1 relating to area prices (35 PUR3d 195) in the latter part of 1960. No attempt was made to determine rates for the eastern Kentucky area here involved, which, in any event, is not covered by the prior policy statement.

#### *Depreciation and Depletion*

For annual and accrued depreciation and depletion, the examiner had used the book figures of the two companies, against contentions that such figures were excessive and should be adjusted downward. United Carbon based a reserve requirement study on an average overall service life of wells and gathering lines of forty years using the straight-line method and a 2½ per cent annual rate. While the commission indicated that it would prefer to record the depreciation of gas wells on the basis of unit of production rather than the straight-line

method, there was no evidence in the record as a basis for applying the unit-of-production method. However, it found the company's figures reasonable and adopted them, noting that such an adjustment of reserves and annual charges is entirely proper and has been applied in the past in order to make the reserves correspond with requirements.

Since Columbian Fuel admitted that its reserves were satisfactory for accounting purposes, the commission saw no reason to recompute its reserves for depreciation and depletion for this rate case. Accordingly, the company's book amounts were used.

Contrary to the examiner's determination, the companies contended that they should be permitted to retain the tax benefits of percentage depletion and intangibles by not employing these tax deductions in computing the allowance for income taxes. They claimed the benefits of the tax deductions in addition to the usual rate of return, contrary to the commission's conclusions in previous decisions (29 PUR3d 469, 32 PUR3d 209, 35 PUR3d 257).

It appeared that the additional deductions from the statutory incentives resulted in a tax saving of \$168,000 for United Carbon and nearly \$111,000 for Columbian Fuel. The commission did not make a specific allowance for the tax incentives in the cost of service since the 11 per cent rate of return allowed United Carbon amounted to more than \$423,000 and the 10 per cent return allowed Columbian Fuel amounted to \$269,000.

#### *Exploration and Development Cost*

United Carbon was allowed a three-year

## PUBLIC UTILITIES FORTNIGHTLY

average of exploration and development expenses, rather than a five-year average adopted by the examiner. This expense has varied annually for this company. For Columbian Fuel the 1957 test-year expense itself was allowed in view of an upward trend in this producer's expense for this item.

Investment in undeveloped leases was allocated with exploration expenses on a company-wide basis, as opposed to the examiner's allowance of actual investment in the eastern Kentucky district here involved. A producer's need for gas, said the commission, is ordinarily on a broader basis than the particular locality where one sale is made.

### *Rate of Return and Cost of Service*

In determining the companies' cost of service, the examiner had adopted a rate of return of 9 per cent as against the companies' claims to a substantially higher return. He had fixed United Carbon's cost of service at 16.60 cents per Mcf and Columbian Fuel's at 23.29 cents.

United Carbon's stock is held by the public. At the end of 1957 its capital structure consisted of 7 per cent debt and 93 per cent common equity. The cost of its debt capital was approximately 3.17 per cent. Columbian Fuel, on the other hand, is wholly owned by Columbian Carbon Company and is dependent on the latter for capital. The capital structure of the parent consisted of 14.8 per cent debt and 85.2 per cent capital stock and surplus. Its cost of debt capital was 3.5 per cent. The commission considered it appropriate, as to Columbian Fuel, to consider the cost of money to the parent.

The commission noted that, in past cases, it has always considered a number of factors in arriving at a proper allowance for common equity and rate of return, and that it has given "some weight

with judgment" to the earnings-price ratio of the company involved and to that of other companies similarly situated. But the other factors, it cautioned, must be given considerable weight where independent producers are concerned. In the instant case, the individual earnings-price ratios of the two producers, although still to be considered, did not have the same significance as if they were engaged solely in oil and natural gas production.

An average earnings-price ratio of 7.4 per cent for a group of thirty-nine companies engaged in oil and gas production was considered significant. However, more than this "bare bones" cost of equity would be required. Even an additional allowance to cover the cost of financing and to enable the companies to attract capital at reasonable cost would not be sufficient for independent producers. Average earnings of 14.4 per cent for the thirty-nine producers for a five-year period was considered significant, as was also the ratio of earnings available for average stated common equity in the case of another group of independent producers in the Appalachian area. This average ranged from 11.22 per cent in 1953 to 13.10 per cent in 1957.

The commission also took into consideration the fact that the acquisition of supplies of gas in the Kentucky area has been substantially less than withdrawals from the reserves over the postwar period. An expanded program of drilling must be undertaken, and wells must be drilled deeper at increasing cost. There must be a sufficient incentive, it was pointed out, to induce the producers to enter into such a program.

With due regard to the difference in the earnings-price ratios of the two producers, the commission arrived at an allowance of 11.5 per cent on the common equity of United Carbon and 11 per cent

## PROGRESS OF REGULATION

for Columbian Fuel. Fair rates of return were found to be 11 per cent and 10 per cent, respectively.

The cost of service of each company was found to be somewhat more than 26 cents per Mcf, so that the proposed rate of 26 cents was reasonable. The commission recognized that the evidence with respect to the treatment of United Carbon's depreciation and depletion was not entirely satisfactory, but that no such defect applied to Columbian Fuel. In any event, since the cost evidence supported

Columbian Fuel's rate of 26 cents to United Fuel for sales from eastern Kentucky, United Carbon should not be required to charge a lower rate for similar sales to the same customer from the same area.

Any such difference would tend to discourage production by United Carbon and would not be in the public interest. The 26-cent rate was further supported by field price evidence. *Re United Carbon Co. et al. Opinion No. 340, Docket Nos. G-9572, G-9573, January 27, 1961.*



### Outside Service by Sanitation District Held Purely Contractual

THE Colorado supreme court affirmed a lower court judgment in favor of a sanitation district in an action by an outside landowner who sought to recover most of a voluntary payment to the district which he had made in order to obtain service. The payment amounted to more than \$3,000 and was intended to defray the expense of annexation and the installation of a pipeline to serve the area owned by the plaintiff. It appeared that a much smaller payment was required later of other outside landowners similarly situated. The plaintiff urged that he was entitled to recover the difference, or nearly \$3,000.

The court pointed out that a sanitation district, like other districts, is a quasi-

municipal corporation, created by the legislature and having for its purpose the mutual benefit of the landowners of the district. There is no duty to furnish service to landowners outside the district.

The relationship between the plaintiff and the district in this case was purely contractual, said the court, and the reasonableness of the conditions or terms of inclusion within the area, so as to afford the benefits of service, was not subject to judicial review. The courts may only determine whether the district has complied with the terms of the contract. A contention that a sanitation district is a public utility was rejected. *Schlarb et al. v. North Suburban Sanitation Dist. 357 P2d 647.*



### Acquisition Cost May Not Be Used As Sole Measure of Value

THE Pennsylvania superior court reversed and remanded a commission order (34 PUR3d 322) denying a steam company a rate increase. Since the company had purchased its plant from an electric company in 1956, the commission had abandoned its traditional considera-

tion of original cost and reproduction cost in determining the fair value rate base. It had substituted acquisition cost as the sole measure of value, on the theory that the production plant had been designed and constructed primarily for use in generating steam and electricity rather than

## PUBLIC UTILITIES FORTNIGHTLY

steam heat and, therefore, the acquisition cost of all the property at the time electric generation was abandoned was devoted by the company solely to the production of steam heat.

### *Not Equivalent to Fair Value*

The court could not see the logic in the so-called "change of use" and it did not find support for the theory in the evidence. Assuming this change of use theory has some possible validity, said the court, it should be applied only to the production plant and not to the other property acquired by the company. The commission had fundamentally departed from precedent.

There is no particular formula by which the commission is bound in fixing the rate base. All facts which have a relevant bearing on fair value, as that term is used in rate proceedings, should be considered. Under the fair value rule, prevailing in the state, consideration should be given to original cost and average price reproduction cost.

The commission is required, in fairness to both the utility and the customer, to reject as the predominant measure of value any particular measure which would be unreasonably advantageous to one at the expense of the other. Neither original cost nor any other single measure of value is considered the equivalent of fair value and need not be given predominance by the commission in fixing a rate base. But where the commission ignores the traditional measures of value, its action amounts to an error of law.

### *Original Cost*

The original cost which is required to be considered, held the court, is the original cost of construction. The amount paid by the company in acquiring the utilities, even if it be assumed that the

transactions were at arm's length, could not be adopted as original cost for rate-making purposes.

### *Reproduction Cost*

The only reason for not giving weight to reproduction cost, continued the court, would arise in situations where such a high degree of obsolescence exists that no responsible management would consider reproduction of the plant. In the instant proceeding, there was a question raised concerning the extent to which there was obsolescence existing in the company's boiler plant. This, however, accounted for less than half of the total net depreciated original cost and reproduction cost. The remainder of the property, especially the distribution system, could not be considered obsolete. The obsolescence found to exist in the boilers was that of an improvement in the design of boilers. This obsolescence had been considered, measured, and accounted for in the deduction for accrued depreciation as the law provided.

### *Evidence of Acquisition Cost*

The commission had reasoned that the acquisition cost represented fair value of the property for the limited use and service to which it would or could be devoted. However, the record showed that the reason for the sales price being as low as it was, was the desire of the electric company to discontinue rendering steam-heat service in the area. In order to be relieved of the necessity of continuing such service, the court pointed out, the company might have been willing to sell at a substantially reduced price.

There had been no evidence presented to show how the price was arrived at or that it was indicative of the market value at that time or what relationship the price had to the possibility of being required to



## PROGRESS OF REGULATION

continue service. In any event, acquisition cost did not become a substitute for original cost.

### *Change of Ownership Immaterial*

The court could not see what difference the change of ownership made. Had not the electric company sold the property to the steam company, it would have been required to operate it for steam-heat service and its rate base would have been determined by consideration of the original cost of construction, except that the total production plant would have been allocated on the basis of 40 per cent to steam heat as against 60 per cent to generation of electricity. This determination would have been based on a previous allocation made by the commission.

If, therefore, the court asked, the rate base for the electric company would have encompassed the original cost of construction of the facilities used in steam-heat service, and the ultimate cost to the

consumer would have been relatively the same as that proposed by the steam company, what other legal basis could justifiably be used? The court could not see the application of an entirely new measure of value based upon the cost of acquisition simply because of a change in ownership. The fundamental principles to be applied in determining fair value for rate-making purposes, it said, do not turn on the question of ownership but upon factors which have become well-established.

The commission erred in making a lump sum valuation and in concluding that the sale price represented the fair value of the property at the time of acquisition.

Although the state commission need not give equal weight to all measures of fair value, neither can it weigh fair value by only one consideration. *Scranton Steam Heat Co. v. Pennsylvania Pub. Utility Commission et al.* 167 A2d 693.



## Confiscation and Notice Issues Warrant Judicial Trial

THE Texas supreme court held that water companies objecting to a Houston rate ordinance were entitled to a judicial trial on allegations of confiscation and deprivation of due process by reason of lack of notice and hearing. In a suit by the utilities for a temporary injunction against the enforcement of the rate ordinance, the trial court, affirmed by an appellate court, dismissed the suit on the ground that it had no jurisdiction, apparently because the ordinance on its face was regular and valid and because administrative remedies had not been exhausted. The lower judgments were reversed, and the cause was remanded for trial.

A rate hearing had been held in mid-1957, but no rate ordinance was issued

until mid-1959, when the ordinance here under attack was passed. Before its issuance, the water company had requested a resumption of the hearing so that up-to-date information could be presented. It was alleged by the utility that the 1957 hearing was an improper basis for the ordinance. However, no further hearing was granted.

### *Court Jurisdiction Not Barred*

The court held that if the rates fixed by the ordinance were so low as to be confiscatory, as alleged, the ordinance was void, and it held that the allegation was sufficient to entitle the utility to a judicial determination of the fact. The fact that the ordinance provided a means for the utility to obtain a new hearing if it was



## PUBLIC UTILITIES FORTNIGHTLY

dissatisfied with the rates established did not bar court jurisdiction on the theory that the utility should first exhaust its administrative remedies. The ordinance made no provision to stay rates pending the outcome of a new hearing. The courts will not require the utility to suffer under allegedly confiscatory rates until the city has completed its second hearing. An administrative body cannot, by reserving to itself the power to change a ruling, deprive the courts of jurisdiction to the detriment of the parties injured by the ruling, it was pointed out.

Although the petition showed that a hearing had been held in 1957, it also showed the utilities' allegation that conditions had changed so as to render such hearing an improper basis for the ordinance. When this was coupled with the allegations that the utilities had repeatedly requested a hearing and that the ordinance was passed solely to render moot another suit pending between the parties, said the court, the petition presented facts sufficient to entitle the utilities to a trial. *Glen Oaks Utilities, Inc. et al. v. City of Houston*, 340 SW2d 783.



### Federal and State Regulation of Acquisitions Under Holding Company Act

THE Rhode Island supreme court dismissed a petition for review of a state commission order affirming an administrator's decision approving the proposed sale of certain assets and stock of one utility to another utility. The prime and only purpose of the proceeding was to evidence compliance with applicable state law respecting acquisitions involved in effectuating the first step of a decentralization plan under the federal Pub-

lic Utility Holding Company Act of 1935.

The Securities and Exchange Commission had found that compliance with state laws would be detrimental to carrying out the provisions of the act, thus vesting absolute and complete jurisdiction in the federal commission and courts. This rendered determination at the state level meaningless. *Kelaghan v. Public Utility Hearing Board*, 166 A2d 421.



### Pumping Costs Reflected in Water Rate Differentials

THE Massachusetts commission disapproved rates proposed by a water company based on a rate of return of 6.59 per cent. A return in excess of 6 per cent would be unreasonable, it was held, in view of the fact that 6 per cent would enable the company to pay dividends of approximately 5.5 per cent on the book value of the equity investment at a payout ratio of 70 per cent. A substantial rate increase was authorized, nevertheless, since the company was then earning only 3.4 per cent on its rate base.

Unfinished construction and cash working capital were eliminated from the rate base. Also eliminated was a portion of customers' advances for construction representing uncommenced or uncompleted construction.

#### Rate Differentials

The commission approved a proposal to eliminate a rate differential based on purely political boundaries, on the ground that a rate structure built on such a foundation is unsound. The company

## PROGRESS OF REGULATION

proposed, on the other hand, to maintain a rate differential between "high service" and "main service," on the premise that "high service" involved additional pumping costs. This differential was allowed, though the commission pointed out that it would not be unsound to eliminate even this differential. The company was required to submit a study to determine the effect which elimination of this differential would have on the customers, without producing any additional gross revenues. The company was also required to spell out clearly which customers would be subject, under its proposed schedules, to

"high service" and which to "main service."

The company allocated all of the costs of transmission and distribution mains to the first and second blocks. The third block, applicable to very substantial users, contained no allocation of costs of mains. This was not found to be arbitrary or unreasonable. The task of establishing the rate structure, as distinct from the rate level, said the commission, is left to the discretion of management unless it is determined that an unreasonable discrimination exists. *Re Dedham Water Co. DPU 13271, January 27, 1961.*



### Return Related to Operating Revenues And Rate Base of Transit Company

THE District of Columbia commission refused to grant a rate increase to the D. C. Transit System, Inc., after finding that existing rates were yielding a return of 4.92 per cent on gross operating revenues or 8.31 per cent on rate base. Such earnings, in the opinion of the commission, fell within the range of fairness and would provide sufficient revenue to meet all allowable expenses, including taxes and depreciation, interest on debt, plus reasonable dividends, and an increment for surplus commensurate with the risk involved.

The commission said that it was mindful of its duty to make this company an attractive investment for private enterprise on the one hand and of the desirability of stimulating patronage of public transportation on the other. It was acknowledged that any increase in rates results in loss of patronage. The commission believed that the best interests of the public dictate an avoidance of a rate increase in the absence of a clear showing that existing rates are inadequate. It decided that the company had made

no such showing in this proceeding.

Interveners argued that the company's rates should be established under the "rate base-rate of return" method. The commission rejected this argument and reaffirmed its earlier decision (33 PUR3d 137) in which it adopted the gross operating revenue method of rate making. The commission said, however, that it did not believe that this latter method should be the sole determinant of the reasonableness of rates.

Its experience with that method and with the "rate base-rate of return" method has indicated that both are valuable measures of the reasonableness of the earnings of a transit company. The commission said that it was fully aware that the ordinary "rate base-rate of return" approach to allowable earnings is not as reliable a gauge in the case of transit companies as it is in the case of electric, gas, and telephone utilities for the reason that the revenues and expenses of transit companies are both relatively high as measured against their plant investments.

## PUBLIC UTILITIES FORTNIGHTLY

The commission found that the rate base method of fixing rates affords a sound basis for testing the reasonableness of the rate of return computed under the gross operating revenue method. For this reason it concluded that both methods should be employed.

### *Original Cost Basis for Depreciation*

The commission held that original cost less estimated salvage constitutes an appropriate base for measuring depreciation expense, that it is just and equitable for both investors and ratepayers. The company, however, proposed that since it had been experiencing rising costs, the commission should employ a base which combined replacement cost for some property with fair market value for other property. The commission observed, however, that replacement cost as a base has many serious faults. In the first place, it assumes that depreciation should provide the means for financing the new property with which the old is replaced. It pointed out that for many categories of property replacement in kind is the exception rather than the rule.

Another objection was that the use of replacement cost is "a perversion of depreciation accounting from its primary purpose of recording as operating expense the cost resulting from the consumption of property in service." Moreover, the commission said, depreciation in theory is unrelated to replacement since

depreciation occurs whether or not the property is replaced.

It was also believed that the use of replacement cost gives rise to other difficulties if the possibility of fluctuating prices is considered. For example, if prices were rising the use of replacement cost base would compel consumers to provide additional capital for the utility, at least to the extent that replacement costs were greater than the costs of the depreciating equipment. To ask the consumers to pay more than the cost would be forcing them to contribute to the capital of the enterprise. For these reasons the commission rejected the company's proposal. The commission also held that the straight-line method of accruing depreciation rather than the sum-of-digits method was appropriate for use in this proceeding.

According to the commission, the group method is not the most desirable method for depreciating buses. It held that the unit method of depreciation should be utilized and that a single purchase of like buses could be treated as a unit. The commission concluded that the annual rate of depreciation applicable to buses, including spare parts and accessories, should be 5.74 per cent. This is equivalent to a 17-year life with 2.5 per cent salvage. *Re D. C. Transit System, Inc. PUC No. 3640, Formal Case No. 474, Order No. 4735, January 18, 1961; opinion February 27, 1961.*



## Motion to Vacate Commission's Restoration Of Operating Authority Denied

THE North Carolina commission denied and dismissed a motion made by a common motor carrier seeking to vacate a commission order canceling a previous order which had revoked the operating authority contained in the certificate of

an irregular route common motor carrier. The matter presented by the motion was one of first impression to the commission and arose from an interesting set of facts.

In a previous proceeding, the commission had granted the certificate to the car-

## PROGRESS OF REGULATION

rier but had subsequently issued a show-cause order when it was revealed that the carrier had not filed evidence of required insurance coverage. The carrier did not appear at the hearing and the commission revoked the carrier's certificate.

Later, the commission, by order, vacated the certificate cancellation after the carrier showed it had not received the certificate cancellation order and that it had filed the evidence of proper insurance coverage after it had received the show-cause order.

Subsequently, the carrier filed an application for permission to sell and transfer its operating authority. The carrier which made the motion in the instant case protested the application for sale and, pending hearing, filed the motion to vacate the order canceling the certificate revocation and restoring the carrier's operating rights. It claimed the order had the effect of granting new authority to the carrier without requiring the carrier to file a new application, without notice to other carriers and without a showing of public convenience and necessity. It alleged that the mere striking out of the cancellation order and the restoration of the original rights had denied it the chance and the right to protest.

### *Motion from Nonparty*

The case was one of first impression in at least three respects. First, the moving carrier had filed the motion in a proceeding to which it was not a party, had never been a party, and did not seek to become a party, nor had it asserted that it was either a necessary or proper party in order that it might protect any interest it might have.

While the statutes provided for protest and intervention, the commission said, they did not provide that every public utility which might be affected by

a proceeding of some other utility before the commission or an order of the commission, was, as a matter of course, a party to such proceeding or order. The movant was without authority to file and maintain a motion in the cause.

### *Modification of Order*

In the second place, the motion was an attack on the authority of the commission to change or alter an order issued by it. Never before had any public utility ever questioned the right of the commission to alter its decision.

The commission stated that it could at any time upon notice to the public utility affected and after opportunity to be heard, rescind, alter, or amend any order or decision made by it. The carrier against which the motion had been directed was the carrier whose rights were affected and was the carrier which had been afforded an opportunity to be heard. That carrier had not complained. If the statutory authority of the commission to amend an order was other than as interpreted, the commission said, it waited with anticipation for such information from appellate sources.

### *Demurrer to Motion*

In the third place, the demurrer to the motion, made by the affected carrier, offered an interesting phenomenon. The statutory provision was to the effect that the defendant could demur to the complaint on six stated grounds. The statute seemed to confine demurrers to complaints. Here, it had been applied to a motion in the cause. The commission had allowed it, and it had allowed the reasons set forth in the demurrer to be argued as a basis for denying the motion. It was a new procedure.

### *Dissenting Opinion*

Commissioner Eller issued a strong dis-

senting opinion. The question involved was not whether the commission may rescind, alter, or amend its orders or decisions, he said, but whether the moving carrier operating within the same territory was entitled to notice and hearing before the commission reinstated the affected carrier's authority. He thought it was. When an authority goes out of existence, the dissenting commissioner said,

it is out of existence. When it is sought to be revived on grounds other than mistake, excusable neglect, etc., it is in the same position procedurally as if it were seeking new authority. Carriers operating in the same territory are as fully entitled to notice and hearing as they would be if it were an application for new authority. *Re Nance, Docket No. T-304, March 10, 1961.*



### Annexation of Members' Territory Does Not Bar Co-operative's Right to Serve

THE North Carolina supreme court reversed and remanded a judgment enjoinin ga co-operative from selling current to members residing within the corporate limits of a municipality. The co-operative was purchasing current for resale to its members from an electric company that had been franchised by the municipality to serve residents. The contract between the company and the co-operative prohibited the co-operative from serving residents of an incorporated city or town.

The court, construing the contract provision, held that the phrase "who are not located in any incorporated city or town" was not intended to prohibit the co-operative from serving members who had been receiving current for many years. To hold otherwise would leave such members without service, and would produce a prohibited discrimination between members of the co-operative.

#### *Franchise Power Subordinate*

Having concluded that the contract did not prohibit the co-operative from selling to members merely because they resided within an area annexed by the city, the court took up the question of whether the

contract right of the co-operative to sell to its members was invalid because legally prohibited.

The company and the municipality claimed that the lack of a franchise voided such contract right.

The court pointed out that the legislature, by granting to municipalities the right to franchise, did not deprive itself of the power to control or to delegate to other public agencies the right to control specific utilities in whole or in part. Municipalities' rights, in that regard, are subordinate to those of the commission.

The commission was the body that had been delegated the power to say when and under what conditions power companies should furnish service, and such authority related to service inside of as well as outside of municipalities. To invest towns served by utilities with the power to regulate and prescribe the manner in which service may be rendered inhabitants might well lead to a chaotic condition, said the court, seriously interfering with the ability of the utility to render equal service to all residing in the area served by it. *Duke Power Co. et al. v. Blue Ridge Electric Membership Corp.* 117 SE2d 812.





## Necessity of Approving Lease of Utility Property

THE New Jersey board refused to rule on a railroad company's petition for approval of a sale of land until the company had first obtained approval of a prior lease of the land. The board ordered the company to file a petition within thirty days for approval of the lease. The company asserted it has not been the practice of the railroads in New Jersey to obtain approval of leases of surplus railroad property. Furthermore, it was contended, the question as to what leases require approval was being litigated in the courts. As another reason for not seeking approval of the lease, the company pointed out that the lease was entered into in 1941 when the properties of the

company were in the custody of a federal district court under the bankruptcy laws.

The board observed, however, that it is the company's statutory obligation under New Jersey law to obtain the board's approval before leasing its property, and that it is the board's duty to pass upon a lease of utility property in order to safeguard the public interest. Nor is the board's jurisdiction barred in the case of utility property in the hands of a receiver in bankruptcy. Its jurisdiction is buttressed by a 1939 United States Supreme Court decision (31 PUR NS 242), said the board. *Re Central R. Co. of New Jersey*, Docket No. 6010-706, January 27, 1961.



## Metropolitan Water District Properly Enjoined from Imposing Surcharge

THE Nebraska supreme court affirmed a judgment enjoining a metropolitan water district from imposing and collecting a surcharge, from imposing penalties and taking punitive action for refusal to pay the surcharge, and from exacting a rate for seasonal use of water not applicable to all seasonal users on the basis of the amount of water used. The surcharge was held to be discriminatory and unreasonable since there had been no showing that rendering of service to non-conserved air-conditioning equipment owners was more costly.

Public service corporations having power to adopt rules and regulations, pointed out the court, are required to impose reasonable requirements. The district had been motivated, in establishing the surcharge, by a purpose designed to prevent the installation of additional non-conserving units and to encourage the in-

stallation of water-conserving equipment on existing nonconserving units, thus reducing the future necessity for enlargement of water production capacity in order to meet peak demands. Although such motivation did not alone make the surcharge discriminatory, nor did the classification per se, the evidence showed that the specific method of classification employed and the rate differentials rendered the charges unreasonable and discriminatory.

The surcharge had not been based upon units of service rendered but upon the kind and character of equipment used. It related to but one type and not to all seasonal uses. It amounted to a tax on equipment in favor of the district and permitted rates not based on the amount of necessary return. It was prejudicial and discriminatory as to persons who installed nonconserving units prior to the

## PUBLIC UTILITIES FORTNIGHTLY

adoption of the rate. It imposed an illegal arbitrary charge without regard to quantity of water used. It ignored the fact that the district had sufficient capacity to meet all peak demands. Lastly, it discriminated against users of nonconserved equipment by excluding from the application of the surcharge, industries and commercial firms whose water con-

sumption remained steady regardless of season.

To prevent the enforcement of a rate which was discriminatory, held the court, the injunctive process was available to a user of water against the district furnishing the water. *Erickson et al. v. Metropolitan Utilities Dist. et al.* 107 NW2d 324.

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### Other Recent Rulings

**Future Probability Not Controlling.** The Louisiana supreme court held that the probability of increase in business due to newly developing industry in an area is insufficient to warrant the expense of maintaining a railroad agency station not required by public convenience and necessity. *Texas & P. R. Co. v. Louisiana Pub. Service Commission*, 124 So2d 902.

**Municipal Power District Certificate.** The Nevada supreme court has held that a municipal power district is not exempt from the requirement of obtaining a certificate from the commission since it does not fall within the statutory meaning of municipality. *White Pine Power Dist. No. 9 v. Nevada Pub. Service Commission et al.* 358 P2d 118.

**REA Telephone Return.** In fixing rates for an REA-financed telephone company, the Georgia commission allowed sufficient revenues, along with depreciation accruals, to enable the company to meet its REA debt service requirement and pro-

vide a reasonable return on the equity capital invested. *Re Brantley Teleph. Co., Inc. File No. 19448, Docket No. 1598-U*, January 13, 1961.

**Jurisdiction As to Rate Dispute.** The Federal Power Commission held that it was neither necessary nor appropriate for it to determine a rate dispute between a natural gas producer and a purchaser where litigation was then pending in a federal court respecting the controversy, which had arisen upon the judicial invalidation of a state minimum gas price order. *Re Socony Mobil Oil Co. Docket No. G-16717*, January 24, 1961.

**Passenger Train Abandonment.** The New Jersey board refused to permit a railroad company to discontinue passenger train stops at several stations despite financial loss, but the company was allowed to discontinue the use of station buildings considered unnecessary for adequate service. *Re New York, S. & W. R. Co. Docket No. 6011-827*, January 31, 1961.

# Industrial Progress



## Murlyon D. LaGrone Joins Zinder & Associates, Inc.

In association with the consulting staff of Zinder & Associates, Inc., consultants and engineers specializing in power and energy industries, has announced by H. Zinder, president, prior to joining the Zinder organization, Mr. LaGrone was with Consolidated Gas Utilities Corporation, Oklahoma City, Oklahoma from July 1, 1960 with the Arkansas Louisiana Gas Company, Mr. LaGrone became assistant treasurer of the merged organization. He has more than twenty years experience in the natural gas industry, including experience in the fields of construction, accounting and budget control, operation, rates, regulation, taxation and financing.

Mr. LaGrone will be located in the Zinder & Associates' Dallas office. The firm provides consulting services to oil and gas production companies, pipeline and distribution companies, financial institutions and industrial concerns. Other offices are located in Washington, D. C., New York, Houston, Los Angeles, San Francisco, and Seattle.

## Delaware Power & Light Announces \$115,000,000 Program

Construction plans amounting to about \$115 million in the current five-year period, 1961 through 1965, were announced recently by A. T. LaGrone, president of Delaware Power & Light Company. The expenditures represent various construction projects planned throughout the Delmarva Peninsula by the company and its two subsidiaries. One of the major categories among

the program projects is an estimated \$46 million for new electric and gas production facilities to be added to the system. Another \$41 million is planned for expansion of and extensions to the distribution network to increase service capacities to present customers while providing additional capacity for new customers. An estimated \$13 million will be required for additions to the transmission system while \$10 million will be used for expansion of substations. The balance of the planned expenditures are allocated for numerous miscellaneous projects throughout the area.

## U.G.I. Plans \$7,196,000 Expenditure in 1961

THE United Gas Improvement Company (Philadelphia, Pa.) reports that during 1960 construction expenditures for all Divisions (excluding the Philadelphia Gas Works Division) amounted to \$6,756,484. Major projects were an extension to the Reading Service building to accommodate a new accounting center, and a natural gas supply line to Hazleton. With the installation of this latter line the entire service territory of the company, (Continued on page 16)

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March 30, 1961.

## INDUSTRIAL PROGRESS—(Continued)

excluding Philadelphia, is now being supplied straight natural gas.

Expenditures in 1961 for capital purposes are estimated to be \$7,196,000. Most of the proposed expenditures will be used to provide facilities, both gas and electric, to meet growing customer demands.

### Ohio Edison and Pennsylvania Power Report Large Expansion Expenditures

OHIO Edison Company and its subsidiary, Pennsylvania Power Company, spent \$56,787,766 in 1960 in the expansion and improvement of their properties. More than half of this total was for the continuation of construction at the W. H. Sammis plant in Stratton, Ohio, on the Ohio river. The second of four 173,000-kilowatt generating units was placed in service at the plant in the summer of 1960. The third and fourth units are expected to be in service in the summers of 1961 and 1962, respectively.

Construction of two 345,000-volt lines from that plant, one to Evergreen substation in Warren and the other to Star substation southwest of Akron, were completed. As planned, these lines are being operated at 138,000 volts until completion of the last generating unit at the W. H. Sammis plant in 1962.

A 138,000-volt transmission line from that plant to Bluebell substation in Alliance was also built during the year.

### Georgia Power Plans \$22,000,000 Addition to Plant Mitchell

A \$22-MILLION generating unit will be added to the Georgia Power Company's Plant Mitchell near Albany, John J. McDonough, company president, announced recently. The addition will almost triple the installation's size and generating capacity.

Completion of the new 125,000-kilowatt unit will make the South

Georgia installation the fifth most powerful electrical generating station in the Georgia Power Company's state-wide system of 29 plants.

Presently, Plant Mitchell has two generating units with a total capacity of 45,000 kilowatts. The plant became operational in 1948.

Actual construction of the additional unit will begin either late this year or early in 1962. Engineering studies and design work for the unit, however, are currently under way. Engineers have scheduled the unit to go into service in April, 1964.

The new unit, to be added to the east side of the existing plant, will be equipped to burn coal. The coal-handling facilities serving the units in operation will be expanded to serve the new unit.

The additional unit will be even more efficient than the present ones and will operate at a higher steam pressure and temperature.

### \$27,000,000 Expenditure Planned By Boston Edison

PRESIDENT Charles F. Avila of Boston Edison Company, at the annual meeting of stockholders recently stated that the company's capital expenditures in 1961 will exceed \$27 million, as compared with close to \$26 million last year.

A new generating unit with an approximate capability of 160,000 kilowatts will be in operation at the company's Mystic station in Everett on or about May 1 and major extensions and strengthening of the transmission and distribution systems are being carried forward.

### M. W. Kellogg Opens Chicago Power Piping Office

THE M. W. Kellogg Company, New York, a subsidiary of Pullman Incorporated, announces the opening of a new sales office of its Power Piping Division in Chicago, Illinois. The office, at 200 South Michigan Avenue, will service the power piping needs of the steam-electric utility industry in the Midwest. Mr. Robert G. Thompson will be Midwest Regional Manager, in charge of the new office.

Kellogg's Power Piping Division, long a leader in the manufacture and erection of power piping systems, will produce this piping in the new Power Piping Division Headquarters and Manufacturing Plant in Williamsport, Pennsylvania.

Mr. Thompson has had 15 years of experience in the power industry. Prior to his appointment, he was

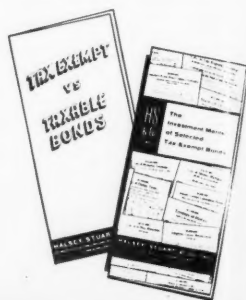
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## INDUSTRIAL PROGRESS—(Continued)

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ner Service & Engineering  
ny Chicago, Illinois. He is a  
te of Illinois Institute of Tech-  
and is a member of the  
I.E. and the Association of  
Steel Engineers. Mr. Thomp-  
licensed as a Professional  
er by the State of Illinois.

### Power Plans New Unit In Northwest Florida

Will construct the first unit of  
electric generating plant on  
Bay near Panama City, Flor-  
re announced recently by Gulf  
Company President Lansing

erating capability of the initial  
million unit will be 150,000 kilo-  
nearly twice the size of the  
unit presently installed on  
system. Provisions are being  
for the ultimate installation of

three additional units and when the  
plant is fully developed, its generating  
capacity will be in excess of  $\frac{1}{2}$  mil-  
lion kilowatts. The plant will utilize  
the most modern methods and equip-  
ment available in the field of steam  
plant construction. Design engineer-  
ing is being performed by Southern  
Services, Inc., the mutual service  
company of The Southern Company  
system. The plant will be equipped  
to burn coal and Unit No. 1 will  
require about 300,000 tons of coal  
annually.

Order for the turbo-generator has  
already been placed with Westing-  
house Electric Corporation and is  
scheduled for delivery in time for  
completing the first unit of the plant  
in the spring of 1964. Inquiries on  
the steam generator have been re-  
leased and bids for this equipment are  
expected in the near future.

The Panama City plant will be the  
third generating facility to be built by

Gulf Power Company in Northwest  
Florida. The first unit of Crist steam  
plant, near Pensacola, was put in  
operation in 1945 with additional  
units added in 1949, 1952, 1959 and  
the fifth unit scheduled for operation  
within the next two months.

Scholz steam plant in Jackson  
County presently has two 40,000 kilo-  
watt units. The first unit was com-  
pleted early in 1953 and the second  
later in the same year.

### Westinghouse to Build Hydroelectric Plant for California Oregon Power

THE Westinghouse Electric Corpo-  
ration has received an order from  
The California Oregon Power Com-  
pany (COPCO) for a new 18,000-  
kilowatt hydroelectric generating  
plant. Named the Iron Gate plant, it  
will be located on the Klamath river

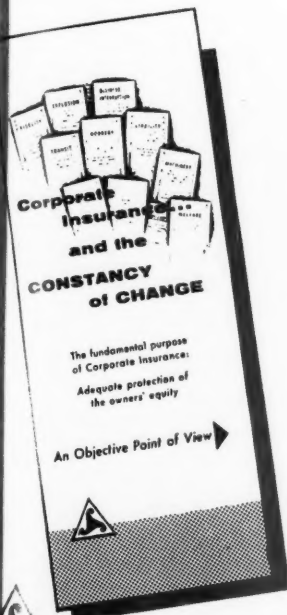
(Continued on page 18)

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near Hornbrook, Calif.

The largest piece of Westinghouse equipment being produced for Iron Gate will be the generator, a "vertical umbrella type," with a rating of 18,947 kilovolt amperes.

As at some of the dozen other COPCO plants in the Umpqua, Rogue and Upper Klamath basins, Iron Gate will be a completely self-contained, automatic station. It will be controlled from an existing plant several miles away. The supervisory control equipment for unattended operation, the main power transformer and the switchgear for the plant are also being furnished by Westinghouse.

Shipment of the various parts to the plant site is to be completed by July 1, 1961, when erection will begin.

### Dr. W. H. Arnold Joins Nuclear Utility Services

NUCLEAR Utility Services, Inc. (NUS) announces that Dr. W. Howard Arnold has joined the staff of Nuclear Utility Services, Inc. as Director of Nuclear Fuel Management.

Dr. Arnold had previously been

associated with the Westinghouse Atomic Power Division as Manager of the Reactor Physics Design Section. He has been responsible for the nuclear design of the SELNI, Carolinas-Virginia Test Reactor, Saxton, SENA, and Southern California Edison reactors.

Donald L. Couchman has also joined the technical staff of NUS. Since 1958 he had been Project Officer for the Shippingport Atomic Power Station in the Naval Reactors Branch of the U. S. Atomic Energy Commission.

### Pacific Power & Light Plans \$28,600,000 Expenditure In 1961

EXPANSION of the Company's transmission system and extension of power distribution facilities are the major goals represented in Pacific Power & Light Company's 1961 construction budget.

The total construction outlay for the 12 months will be \$28,600,000.

A major transmission item this year will be \$2,000,000 for half of a 230,000-volt line from Lewiston,

Idaho, to Walla Walla, Wash. a substation at Walla Walla. The other half of the line will be built by Washington Water Power Company with a terminal substation at Lewiston.

This 230-KV line will deliver power from Snake River development pending completion of the Walla Walla project on the Columbia River. The project is a companion development to Priest Rapids, already delivering power to PP&L and other utilities under long-term contracts.

The largest portion of the \$11,000,000 transmission budget will be spent in Wyoming, where a 138-KV line from Casper to Riverton and an extension another 52 miles from Riverton to Lander and Atlantic are scheduled.

### New York State Elec. & Gas To Spend \$94,000,000 in 1961

NEW YORK State Electric & Gas Corporation forecasts that total expenditures for the year through 1963 will amount to \$94,000,000. This compares with \$80,000,000 spent during the last two years.

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0	2008	0	2008	0	0
1	1195	1195	3203	1195	753449
2	1649	3298	4852	4493	1505703
3	2083	6249	6935	10742	2256308
4	2377	9508	9312	20250	300487
5	2837	14185	12149	34435	37507
6	3245	19470	15394	53905	449
7	3846	26922	19240	80827	52
8	4730	37840	23970	118667	5
	5297	47673	29267	166340	
	6518	65180	35785	231320	
	7029	77319	42814	308839	
	7914	94968	50728	403807	
	8696	113048	59424	516855	
	9554	133756	68978	650611	
	1075	154125	79253	804736	
	126	180576	90539	985312	
		201195	102374	118650	
		220680	114634	14072	
		227278	126596	163	
		282980	140745	19	
		279237	154042	2	
		296186	167505		
		312570	181095		
		327096	194724		
		341050	208366		
		359922	221863		
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## INDUSTRIAL PROGRESS—(Continued)

### Air Conditioning Sales in 1961 Expected To Be Biggest in History

Gas industry has mapped the biggest air conditioning sales campaign in its history for 1961. Its aim: increase sales 70 per cent.

Equipped with new unit capacities and designs from 6.5 tons, the industry expects to increase its sales at least 25,000 units compared with 15,000 sold in 1960.

To plan this stepped-up emphasis on air conditioning, gas companies throughout the nation sent 260 representatives to a series of meetings recently in Birmingham, Dallas, Chicago and Boston sponsored by the American Gas Association.

Executives attending these meetings were told that the air conditioning market is practically untapped. They heard speakers predict that in the next 12 to 18 months, new units would be manufactured which will triple to 80 per cent the market.

It was stressed that an aggressive air conditioning program is of primary importance to every utility company and that an adequate sales force—a minimum of one salesman for every 40 units of sales—is essential.

As examples at the meetings were gas companies which lead the field in air conditioning sales. In each case, these companies emphasized top-calibre effort, company-wide recognition of the importance of the air conditioning department, serviceability, hard-sell promotion and aggressive top management support.

As utilities must maintain high installation standards and service responsibility, the executives were told. Special summer rates and flexible, long-term financing or leasing programs were also recommended. Bill G. Duncan, president of Piedmont Natural Gas Co., Inc., speaking at the Birmingham meeting, said: "I consider the 25,000 goal as minimum. Our company certainly plans to equal or exceed the quota of our system."

As air conditioning is the best investment a gas company can make in its future growth," Richard A. Bear, president of Alabama Gas Corp., told the Birmingham meeting.

Speaking in Chicago, Marvin Chandler, president of Northern Illinois Gas Co., said greater emphasis on air conditioning sales would improve profits substantially in the July-September quarter, when gas utilities traditionally realize only about 10 per cent of their annual earnings.

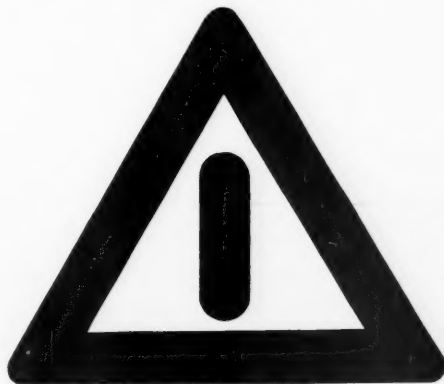
Bill G. Wepfer, sales manager of Arkla Air Conditioning Corp., told delegates that his company plans to produce several new items soon.

### VEPCO Plans Station with 1,000,000 KW Capacity

GENIA Electric and Power Company plans to build a large steam electric power station costing at least \$100,000,000 with an eventual capacity of 1,000,000 kw. The first unit producing 250,000 kilowatts will be in operation by 1965.

In addition to the station, VEPCO will construct a reservoir which will impound a 1,200-acre reservoir of water for cooling purposes. With adequate quantities of coal available at this location, it is expected that the cost of fuel will be substantially less than for other systems where coal has to be hauled.

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# INDEX TO ADVERTISERS

## A

*Allen & Company	✓
*Allied & Chemical Corporation—Plastics & Coal Chemicals Division	
*Allis-Chalmers Manufacturing Company	20
American Appraisal Company, The	20
*American Motors Corporation	
Analysts Journal, The	11

## B

*Babcock & Wilcox, The	
Bechtel Corporation	20
Black & Veatch, Consulting Engineers	20
*Byth & Company, Inc.	
Boni, Watkins, Jason & Co., Inc.	20
Burns & McDonnell, Engineers	25
Burns & Roe, Inc.	20
*Burroughs Corporation	

## C

Carter, Earl L., Consulting Engineer	25
Coffin & Richardson, Inc.	25
Columbia Gas System, Inc., The	Inside Front Cover
*Combustion Engineering, Inc.	19, 20
Commonwealth Associates, Inc.	19, 20
Commonwealth Services, Inc.	19, 20
Consolidated Gas and Services Company	25

## D

Dames & Moore	21
Day & Zimmermann, Inc., Engineers	21
*Documat, Inc.	
*Dodge Division of Chrysler Corp.	
Drake & Townsend, Inc.	21

## E

*Eastman Dillon, Union Securities & Company	
*Ebasco Services Incorporated	
*Electro-Motive Division, General Motors	
Empire Gas Engineering Company	21

## F

*First Boston Corporation, The	
Ford, Bacon & Davis, Inc., Engineers	21
Foster Associates, Inc.	21
Francisco & Jacobus	22

## G

Gannett Fleming Corddry and Carpenter, Inc.	25
General Electric Company	4, 5, Outside Back Cover
Gibbs & Hill, Inc., Consulting Engineers	22
Gilbert Associates, Inc., Engineers	22
Gilman, W. C., & Company, Engineers	22
*Glore, Forgan & Company	

## H

Halsey, Stuart & Company, Inc.	16
*Harriman, Ripley & Company	
Herz Engineering Company	22
Hoosier Engineering Company	22

## I

*International Business Machines Corp.	
Internuclear Company	25
Irving Trust Company	Inside Back Cover

Professional Directory ..... 20-25

\*Fortnightly advertiser not in this issue.

## J

Jackson & Moreland, Inc., Engineers	25
Jensen, Bowen & Farrell, Engineers	23

## K

*Kellogg, M. W., Company, The	15
Kidder, Peabody & Company	23
*Kuhn Loeb & Company	
Kuljian Corporation, The	23

## L

*Langley, W. C., & Co.	
Leffler, William S., Engineers Associated	23
*Lehman Brothers	
*Loeb, (Carl M.) Rhoades & Co.	
Lougee, N. A., & Company	23

## M

*Main, Chas. T., Inc., Engineers	
*McCulloch Corporation	
*Merrill Lynch, Pierce, Fenner & Smith, Inc.	25
Miner & Miner, Consulting Engineers	7
Moloney Electric Company	
*Morgan Stanley & Company	

## N

*National Association of Railroad & Utilities Commissioners	
---	--

## O

*Osmose Wood Preserving Company of America, Inc.	
--	--

## P

Pioneer Service & Engineering Company	9, 23
Pittsburgh Testing Company	25
*Plastics and Coal Chem. Div., Allied Chemical Corp.	
*Pole Sprayers, Inc.	

## R

Ransom, R. A., Company, Inc.	23
Recording & Statistical Corporation	16
*Remington Rand Div. of Sperry Rand Corporation	

## S

Sanderson & Porter, Engineers	24
Sargent & Lundy, Engineers	25
Schulman, A. S., Electric Co., Engineers	25
*Smith Barney & Company	24
Standard Research Consultants, Inc.	24
Stone and Webster Engineering Corporation	17
Stone & Webster Service Corporation	25
Sverdrup & Parcel, Engineers & Consultants	

## U

United Engineers & Constructors, Inc.	24
*United States Motors Corporation	

## W

*Westinghouse Electric Corporation	
*White, Weld & Co.	24
Whitman, Requaardt and Associates	25
Williams, A. W., Inspection Co., Inc.	

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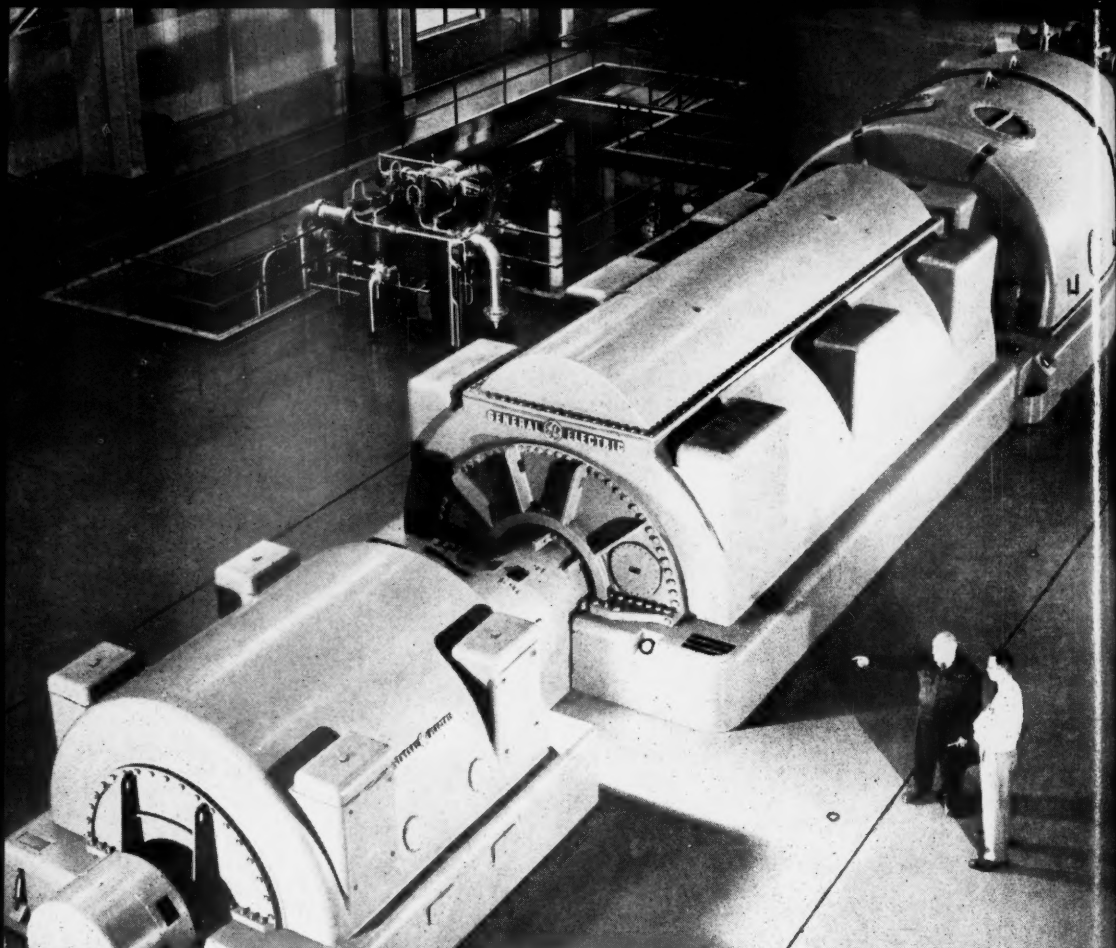
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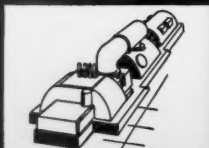
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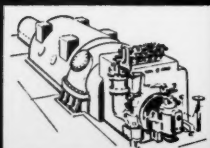
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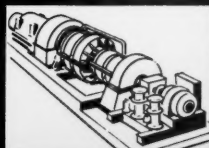
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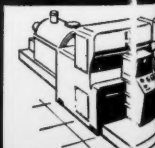
Steam turbine-generators  
for large blocks of power



Steam turbine-generators  
100,000 kw and lower



Gas turbines for peaking,  
base load, combined cycles



Mechanical drive  
turbines for marine